

Military conversion in Canada

Closing the Pinetree Line

Although it is not yet beating its swords into ploughshares, Canada is nearing completion of a project that is turning old military radar stations into centres meeting social needs. For Canadians that look to economic conversion to move the economy away from military production, the Pinetree closure programme is an important example. Ploughshares researcher Ken Epps brings us up to date.

Since 1985 the Canadian government has pursued a little-known programme that has, as part of its mandate, the task of developing civilian uses for facilities now or recently used for military purposes. The programme is finding alternative jobs for workers dependent on military spending. It demonstrates that, under conditions deemed strategically and politically appropriate by the government, Ottawa will actively participate in the replacement of military facilities by civilian ones, with minimized job loss. The programme is the military-to-civilian conversion of the Cadin-Pine Tree Line radar stations.

On March 13, 1985, Erik Nielsen, then Minister of Defence, announced in the House of Commons the closure of 17 of the 24 Cadin-Pine Tree Line radar stations as a result of the joint Canada/US programme to modernize the North Warning System.

The majority of the radar stations in southern Canada that were part of the Cadin-Pinetree Line are being closed because they are deemed to be of "little military value now and ... very expensive to maintain and operate".¹ (The Pinetree Line stretches across the country with radar stations located in all provinces except Prince Edward Island. Although in southern Canada they are to the north of the most populated areas.)

In announcing the closures Nielsen also referred to the government's "social obligation to those communities which have come to derive much of their livelihood from these old stations."² An earlier report by DND's Directorate of Social and Economic Analysis estimated that in closing the 17 stations the government was faced with the loss of almost 4000 jobs (about half of which were military positions) and with significant economic impacts on host communities. Although jobs for the military person-

nel could be found elsewhere within the Department of National Defence, for the civilians who chose to remain in the host communities there would be no further direct or indirect DND employment since DND had decided that there was no further military use for the stations. To meet the "social obligation" to the local communities jobs would have to be found for these civilians. In essence, the government needed to tackle a major military-to-civilian economic conversion programme.

The Pinetree closures have occurred without a major job loss or local disruption.

Having known for some time that the Pinetree stations would be closed the government moved relatively quickly after the announcement in the House was made. In April, 1985, a federal interdepartmental committee was formed to oversee the closures during the following three years. The committee is chaired by the Vice-Chief of Defence Staff and is composed of representatives from the departments of Employment and Immigration (CEIC), Regional Industrial Expansion (DRIE), Public Works, Finance, Indian and Northern Affairs, Treasury Board, the Federal-Provincial Relations Office, as well as the Union of National Defence Employees (UNDE).

In the communities near the stations "local impact committees" were established to "make viable recommendations to propose non-military applications" for the radar stations. The impact committees include repre-

sentatives of the station staff (who act as a liaison between the station and the community), the local members of UNDE, DRIE or CEIC at the regional level, provincial authorities such as MPPs or MLAs, the nearby municipalities, and local businesses. Funding for administrative expenses of the committees is provided by CEIC, through its Industrial Adjustment Service, and occasionally by provincial programmes.

The closures of the 17 radar stations have been phased in - the first five were closed during 1986, the next five by August 1987, and the remaining seven by August 1988. According to Major Bruce Haavisto, the DND official responsible for project management, there have been alternative uses found for 9 of the 10 stations closed by the end of Phase II. The new uses have included a seniors village run jointly by the province and the local community (see the Alsask project), a regional training centre for skilled tradespeople with funding support from UIC, a provincial minimum-security jail, and a native self-contained community with funds provided by the Department of Indian Affairs.

Understandably, the closure process has not been an entirely smooth operation. In Phase I, although the re-employment success rate for those who wished to relocate was 100%, for those who wished to remain, or could not move, there were mixed results. In an interview, Haavisto admitted that there had been some "hardship cases". Municipal representatives of Beausejour in Manitoba, where the radar station closed in 1986, initially called upon the affected communities to demand a cash settlement to help with rejuvenation of local economies. However, a proposed meeting was never held.

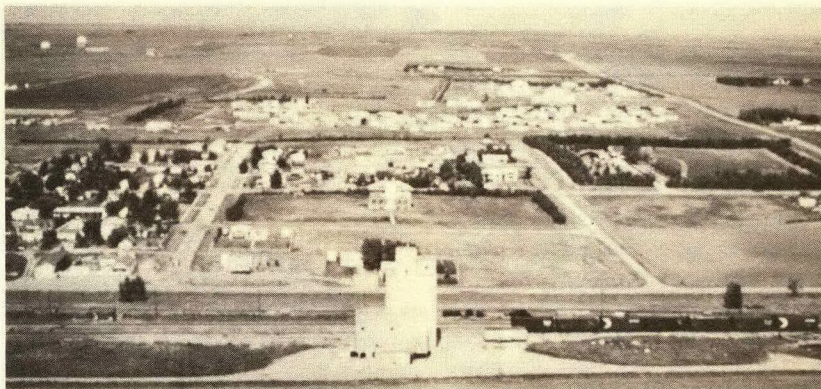
Yet, taken as a whole the Pinetree

Case Study: Alsask, Saskatchewan

Alsask, population 650, is an agricultural community on the border of Alberta and Saskatchewan. In 1960 most of the available land within the village was acquired by the Department of National Defence for Canadian Forces Station Alsask. The station has been a major feature of the village since 1962, and, at the time of the closure, station personnel accounted for more than half of Alsask's population. In 1984 the DND study predicted "the closure of CFS Alsask would be dramatic for the population of Alsask. The essential emergency services would be lost and the unemployment rate would increase by a significant 12.42%. In the face of such facts, extreme reactions may be expected from local people."

In November 1985, eight months after the announcement that CFS Alsask would be closed by August 1986, the organizational meeting of the Alsask Joint Assessment and Planning Committee (AJAPC) was held in the village. Chosen for the committee were the mayor and two aldermen of Alsask, two representatives of Local 806 of the Union of National Defence Employees (part of the Public Service Alliance), the Commanding Officer and another representative of the station, two federal government representatives, and four rural councillors from nearby communities. Additional members were elected later.

The mandate of the AJAPC was "to evaluate the present economic base, work force, local linkages, local amenities, opportunities for expansion and the potential for locating new manufacturing ventures". Since an early committee meeting established that most of the fifty Union of Defence



Aerial view of Alsask, Sask. with former base in background.

Employees members employed by CFS Alsask had been placed in other positions, the main focus of the AJAPC became the search for alternative uses for the station premises that would minimize the impact of the closure on the remainder of the community. Funding to cover administrative costs of the committee's work came, for the first two years, from an Industrial Adjustment Service Incentive Agreement with the federal department of Employment and Immigration.

From the beginning the committee generated, and received, many suggestions for the conversion of the radar station. Ideas included a gasohol plant, a private school, a greenhouse and hydroponics project, a drug and alcohol abuse centre, and a variety of training centre proposals. Committee members met with several federal and provincial government officials to explore funding, potential government uses of the station, and a variety of applicable government programmes. For some time the idea of establishing a fire college and emergency measures training centre in the station with provincial funds held considerable promise. However, by March 1987

both the federal and provincial governments had made clear that they had no use for the station.

Two months later, Public Works Canada approved the sale of the station to the village of Alsask for \$40,000. Although seemingly a bargain for a property of 400 acres, 90 mobile homes, several recreational facilities and a number of other buildings, the figure was no doubt based on the DND's recognition that "the cost estimate for completely demolishing a radar site is between \$4 and \$5 million." A few weeks earlier, the AJAPC had received approval of their proposal to the Community Futures Program for funding to plan local economic development. This funding provided a breathing space for the committee, now evolved to include representatives of other rural municipalities in the area. The time was used to develop what eventually became the main new civilian use for CFS Alsask - a retirement community. As of January, 1988, 20 families were living in the retirement "villa" with expectations that the facility would be filled by the autumn of 1988. Meanwhile, the search for industrial users of the site's larger buildings continues.

Line closures appear to have occurred without major job loss or local disruption. In fact, the Pinetree experience has demonstrated that a conversion programme can be made to work in present-day Canada. It has shown that conversion can involve successful

co-operation, not only amongst government departments in Ottawa, but also federal, provincial and municipal levels of government. Once the decision to close the stations was made, it is clear that joint national level planning has not been in conflict with,

and in fact appears to have been quite supportive of, provincial and municipal interests.

¹ *Hansard*, Commons Debates, March 13, 1985, pp.2976-2982.

² *Ibid.*

Warfighting or peacemaking?

The Military Use of Space

by Bill Robinson

The first satellite, Sputnik 1, was launched by the Soviet Union on 4 October 1957. The military use of space was quick to follow this event: the first military-related satellite was launched a little over a year after Sputnik, and the first anti-satellite weapon test, Bold Orion, was conducted by the United States in October 1959, just two years after Sputnik opened the space age.

The military use of space -- the "militarization" of space -- grew rapidly and continues to this day, but the development and deployment of space weapons -- the "weaponization" of space -- remained embryonic. Most of the approximately 2500 military-oriented satellites that have been put into orbit since 1958 have been directed at five major military requirements (most of which have direct civilian counterparts): intelligence-gathering; communications; navigation; weather monitoring; and geophysical research, the study of the physical nature of the Earth and near space. Only since 1983, with the creation of the US "Star Wars" program, has the prospect of the weaponization of space become imminent.

An important distinction can be made between these two trends in the military use of space. As Daniel Deudney has pointed out, the militarization of space has been a major part of a planet-wide "transparency revolution" which has sharpened the senses of the military machines of the superpowers, but which has also planted some of the seeds, such as the technology for arms control verification, for a future global common security system. "Transparency technologies make possible both the coordinated, highly accurate targeting of weapons and the comprehensive verification of arms limits. Planetary-scale information systems bring the strategic competition between the superpowers to its least stable and most dangerous state. At the same time these systems make planetary-scale



Bedtime Nursery Rhymes
(Revised American Version)

security possible for the first time in human history." In short, the militarization of space has created opportunities for global security as well as dangers to it.

The weaponization of space, on the other hand, promises only danger. A space weapons competition would increase the dangers already posed by the superpower nuclear arms race, undermine existing arms control agreements, and increase the chances of global war.

Canadians have a special responsi-

bility to be concerned about the future uses of space for at least two reasons: first, Canada's location between the superpowers ensures that Canadian territory almost certainly would play a role in any future Star Wars defence (and its associated air defence system); and, second, Canada has the potential, as one of the limited number of nations with advanced space technology, to make a significant contribution to the common security uses of space.

Common security and space

A common security approach to space activities would seek to foreclose the weaponization of space, and to encourage international co-operation in the use of Deudney's "transparency technologies" both for confidence- and security-building measures and to foster greater knowledge and understanding of our planet and the global problems facing it as a whole.

Space weapons ban:

A ban on space weapons would be the most important step towards foreclosing the weaponization of space. Ideally, such an agreement would ban the testing and deployment of all weapons based in space, used against objects in space, or used from space against objects on Earth. This could be accomplished through a treaty banning anti-satellite and other space weapons, an enlarged and strengthened Anti-Ballistic Missile Treaty, or simply a set of agreed limitations on permissible space weapons testing. Currently, the United States government refuses to enter negotiations on any of these possible agreements for fear of hindering the progress of the SDI program. Nevertheless, there is considerable US interest outside of the Reagan administration in negotiating a space weapons ban of some sort in conjunction with deep reductions in US and Soviet strategic nuclear weapons. Progress in this direction will probably depend on the policies of the next US president. Canada could lend its support to progress in this direction by withdrawing its political support for the SDI program (Canada calls the SDI program "prudent") and by encouraging the US and the Soviet Union to negotiate a comprehensive space weapons ban.

Canada has a unique contribution to make on the question of verifying such a ban: Canadian research on a verification satellite, the PAXSAT A study, has established that the verification of a space weapons deployment ban is practical with existing technology. Canada should move ahead with the development of PAXSAT A, and work actively to pro-

The militarization of space has created new chances for global security as well as for continued instability.

mote a moratorium on all anti-satellite, Star Wars, and other space weapon testing until such a ban is in place.

Co-operation in space:

Efforts to build co-operative, international space projects would also be an important part of any common security regime in space. One extremely valuable project would be the establishment of an International Satellite Monitoring Agency (ISMA). The ISMA proposal, originally made by France in 1978, calls for the creation of an international agency to operate surveillance satellites for arms control verification and crisis monitoring. An ISMA would break the superpower monopoly on spy satellites and open the way for international monitoring of arms control compliance and for the identification of suspicious military activities. One important role for ISMA could be to monitor space objects in order to ensure that no weapons were being deployed or weapons tests being carried out.

Canada has conducted research on another satellite, PAXSAT B, to verify arms limitations on Earth. This satellite and the PAXSAT A satellite could make important contributions to ISMA's operations. Canada should continue its development work on these satellites and lend its political and financial support to the ISMA proposal.

Other -- non-military -- projects would also be important for building common security. These projects could include new or expanded co-operative efforts in global communications, environmental monitoring, weather forecasting, resource management, international law surveillance, scientific research, space resource development, and many others. (Many of these efforts also could be undertaken unilaterally, with the information made available for global use.) All of these uses of space would contribute positively to global common security; for example, by helping nations around the world to better

understand and deal with many of the non-military trends, such as hunger and environmental destruction, that threaten human security.

Common security on Earth:

Finally, it is important to recognize that common security in space cannot be divorced from common security on Earth. The ultimate role of space activities is determined primarily by the security system prevailing on Earth. Therefore, it seems very unlikely that the warfighting race in space (both weaponization and militarization) can be foreclosed permanently without an end to its impetus, the warfighting race on Earth. The ultimate answer to the problem of controlling warfighting in space has to be to control warfighting weapons and doctrines on Earth. A common security approach to space has to be supported by a common security approach to the entire planet.

This fact has particular significance for Canada because of this country's strategic location between the United States and the Soviet Union. In order to promote an integrated approach to common security, Canada should make it clear that it opposes the continuing nuclear arms race on Earth and in space, and that it will not make Canadian territory available to the offensive or defensive nuclear forces of either side for pursuing the competition in warfighting capabilities. This position would mean that Star Wars weapons or sensor systems and extensive NORAD air defence systems (such as those being developed under the Air Defence Initiative) could not be based in Canada. Canada would not support Strategic Defence Initiative research and would withdraw from participation in Air Defence Initiative research.

The significance of Canadian territory for strategic defence lends considerable importance to the stance that Canada adopts on this issue -- Canada could, in effect, veto some types of Star Wars and Star Wars-related deployments. On the other hand, Canadian space technology allows Canada to make important contributions to the future common security uses of space. These factors give Canada the ability, and the responsibility, to play an important role in determining the future direction of the utilization of space.

A Nuclear-Free and Independent Pacific Update on the Movement

From 9-15 November, 1987, close to one hundred activists from around the Pacific congregated in the PIUS XII Conference Centre in Manila, the Philippines. They were there to discuss, update and network on the range of issues which form the agenda of the grass roots Nuclear Free and Independent Pacific movement, and to set the movement's agenda for coming years. **Phil Esmonde**, of the South Pacific People's Foundation, sends this first-hand report.

This was the first international conference of the Nuclear Free and Independent Pacific movement (NFIP) since July, 1983 when the fourth conference was held in Vanuatu. The movement was founded in Fiji in 1975 and is the heartbeat of the regional social justice and peace organizations.

Much had changed since the Vanuatu conference of 1983. A partial nuclear weapons free zone had been initiated by Pacific island governments; the independence struggle in Kanaky [New Caledonia] had intensified and become more violent; the French had begun new initiatives in the Pacific islands, spending aid money to curry favour and ease constant criticism of their ongoing nuclear tests in "French" Polynesia; the situation in Belau, the world's first constitutionally nuclear-free state, deteriorated as the U.S. kept the people isolated and dependent on U.S. aid, forcing them to overturn the constitution amid mounting violence and internal anarchy; the Japanese continued to jockey on the international stage for room to carry through with their plan to dump low level nuclear wastes into the Pacific Ocean; a dictator had been removed from the Philippines but to little avail; the whole Pacific region had witnessed a momentous growth of militarization; and Fiji -- long a model of racial accommodation -- elected a Prime Minister (Bavadra) dedicated to the principles of the NFIP movement only to have two subsequent coups remove him completely from power.

These were not new issues for the 61 delegates and 38 observers representing 25 countries at the conference. Many were living and leading the struggles for peace and social justice in their own countries. Also attending were regional organizations such

as the Melanesian Council of Churches, the University of the South Pacific Students Association, and the Episcopal Conference of the Pacific.

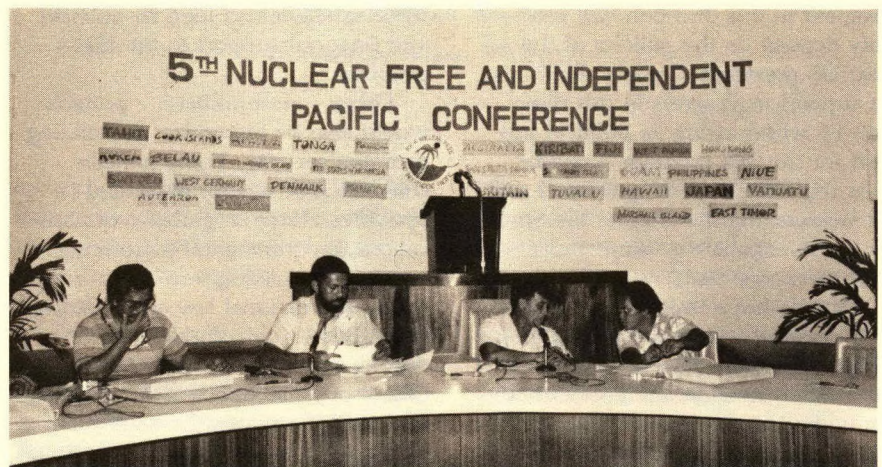
Because of mounting violence in the Philippines, the conference centre was watched over by privately-hired armed guards, a constant reminder that the Philippines was in a state of undeclared martial law.

While security concerns were real, they did not prevent delegates from joining with local groups to march and demonstrate at the U.S. Embassy with a call to shut down the U.S. bases at Clark and Subic Bay. In a later resolution, delegates called on the U.S. to refrain from intervening in Philippines political, military, economic and cultural life, and supported an immediate and unconditional withdrawal of the bases. The conference condemned the rising social costs of the bases, and called for suspension of all foreign military aid.

The NFIP movement has its "Magna Carta" the Peoples Charter for a Nuclear Free and Independent Pacific. Expressing concern with the continuing deterioration in the Philippines and the rest of the Pacific region, upon recommendation of the indigenous peoples of the Pacific the Charter's pre-ambule was amended to include the original anger enunciated in the 1975 original charter.

And the nuclear-free and independent geographic zone of the movement, expanded several times since its inception, was "in principle" expanded to reach the western shores of North America, thus coming in direct contact with indigenous nations along the coast as far north as Alaska. The NFIP Steering Committee, with representatives from seven regions, will work out the specific boundaries of the new zone, but it is clear that it will do much to strengthen the links between North American activists and the peoples of the Pacific, and assist in solidarity efforts amongst Pacific peoples. The proposed new zone will likely be open for signatures and support from the affected indigenous nations of North America.

The conference expressed concern over the increasing militarization of the Pacific, evidenced by new weapons deployment, naval buildups, increased warship visits, and growing



A plenary session at the NFIP Conference: (from left) Peter Kealoha (Hawaii), Lopeti Senituli (Tonga), Charlie Ching (French Polynesia), and Makiuti Tongia (Cook Islands).

superpower tensions.

Delegates deplored, "the rape of our Mother Earth by foreigners who are intent on polluting our waters with nuclear waste; who are intent on destroying the world with the construction of nuclear weapons; who are depleting our natural resources at an alarming rate; and who are interested only in maximizing profit at the expense of our culture, our resources, and our spirituality".

It was in 1983 that the then Nuclear Free Pacific movement became the Nuclear Free and *Independent* Pacific movement. It was a conscious connection between the ongoing colonial structures and attitudes and the continued militarization of the region. The independence link was not only affirmed in Manila but took on an even stronger importance. It was recognized that unless and until the political, economic and military structures which feed colonialism and racism are changed, calling for a Nuclear Free Pacific will remain a call in the wind. The conference affirmed the pivotal need for independence.

Canadian government action in the Pacific came under focused criticism. Noting that Canada was the only foreign country accepting the U.S. invitation to use the archaeologically-rich and sacred Hawaiian island of Kaho'olawe for ship to shore target practice, the conference called on delegates of all countries to mount pressure on the Canadian government to halt this travesty against the Hawaiian people. The conference called for demonstrations at Canadian embassies and missions abroad and for Canada to refrain from using the island for shelling during May 1988 RIMPAC military exercises.

Issue "Flashpoints" discussed at the conference included Fiji, Belau (Palau) and Kanaky (New Caledonia).

Much conference time was spent on Fiji, potentially an issue which could have split the movement because many accepted the coups as indigenous people rightfully gaining control over their lands and culture.

The conference heard from Jone Dakuvula, a Fijian living in Wellington, Aotearoa (New Zealand) and a cousin of coup-leader Colonel Rabuka, that indigenous lands and culture were already secured under the 1970 Fijian constitution. He

Canadian Navy Shells Hawaii

As the approval of a RIMPAC resolution at the recent NFIP conference shows, nowhere has Canada's insensitivity been so clear as in its continued use of one of the eight Hawaiian islands as a target range for naval bombardment.

While the island in use, KAHO'OLAWA, is uninhabited, it contains 544 known archaeological sites, including adze quarries and petroglyphs. The island provides one of the few remaining links to 1,000 years of Hawaiian culture and heritage. In recognition of its historic, cultural, scientific and religious importance, the entire island of Kaho'olawe -- located off Maui -- was placed on the United States Registry of Historic Sites.

Requests that our government stop using the island have come from the Hawaiian government spokespeople (municipal, state and federal), from 38 national and regional Canadian organizations and from 24 prominent Canadians, including the Most Reverend Edward Scott, Primate of the Anglican Church of Canada, the Reverend Lois Wilson, President of the World Council of Churches, Muriel Duckworth, Member of the Order of Canada, and Major General (Ret.) Leonard V. Johnson.

Let the government, the opposition leaders, and our MP's know how we feel about this travesty. The Minister of Defence, Perrin Beatty, has indicated that Canada will use Kaho'olawe for target practice in May of 1988 during RIMPAC military exercises. Urgent action is needed to register your disapproval.

Write:

Prime Minister Brian Mulroney
House of Commons
Ottawa, ON, K1A 0A6

With copies to: Perrin Beatty (Minister of Defence), John Turner, M.P., Ed Broadbent, M.P., all at: House of Commons, Ottawa, K1A 0A6

stated that the coups were stimulated by a desire of the traditional Council of Chiefs to retain their control in Fiji through their political servants, the Alliance Party of Fiji, which was ousted in the election of April 1987. Dakuvula noted that the Prime Minister-elect was Fijian, that all cabinet posts sensitive to Fijians were given to Fijians, and that the Bavadra government was supportive of banning nuclear warship visits to Fiji, of joining the independence struggles in Kanaky (New Caledonia) and West Papua. Dakuvula further informed the conference that some members of the Fiji Anti-Nuclear Group (FANG) had been arrested and harassed, and that there had been repression of trade unions and political activity.

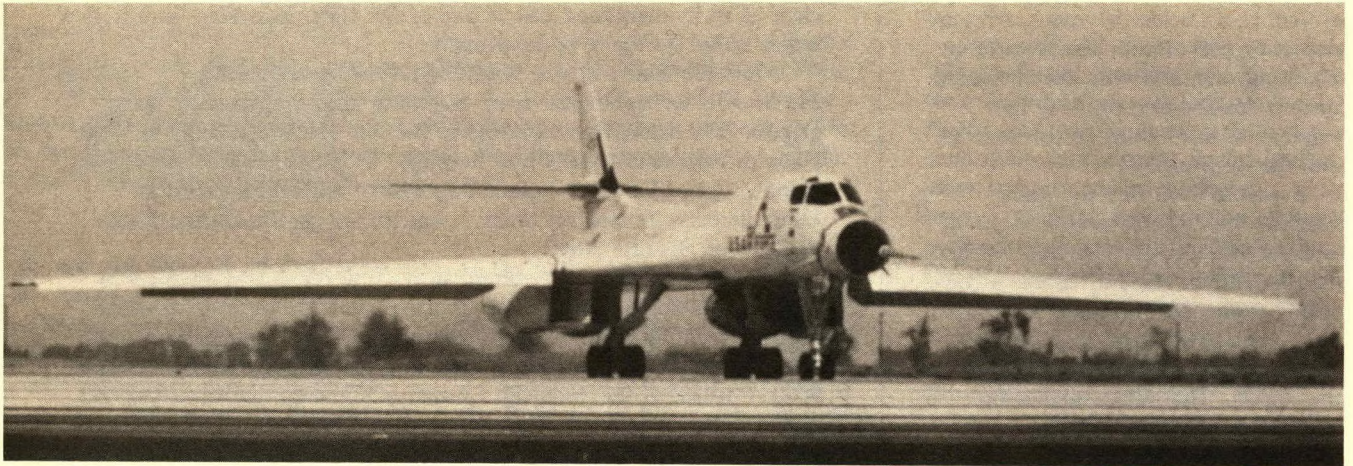
The conference recognized and endorsed the inalienable rights of the indigenous people of Fiji to all their lands, their culture and their religion, expressed sympathy for the suffering of the Indo-Fijians under a repressive

regime, and condemned the military coups in Fiji as a means of achieving political power, and military dictatorship as a means of exercising political power.

This Conference, unlike the previous ones, also included a pre-conference caucus of indigenous peoples which assisted the transfer of information and support and understanding. For the first time, non-indigenous support groups also met together to discuss clarifying their role in the movement and ways in which they could better their support and understanding. These efforts underscore, in the words of Canadian Haida delegate Michael Nicoll, a recognition that it was necessary to overcome "our personal racism and desires to dominate."

The successful completion of the Manila Conference showed that the movement remains strong, committed, organized and growing.

The Green Pine Network: Radio Activity in the North



The B-1B is the latest US bomber to utilize the Green Pine network.

*From Adak, Alaska to Grindavik, Iceland, Green Pine UHF radio transmitters wait to beam the orders for World War Three to bombers of the US Strategic Air Command. Canada plays host to six of these radio sites (most of the Green Pine network) at Argentia and Goose Bay in Newfoundland, and at Cape Dyer, Hall Beach, Cambridge Bay and Cape Parry in the Northwest Territories. Ploughshares researcher **Bill Robinson** brings us this background report.*

The Green Pine radio system ties Canada directly into the operations of the US Strategic Air Command (SAC) bomber force. Green Pine transmitters turn Canada's airspace into a potential staging area for global nuclear war and link Canada to the continuing nuclear warfighting arms race.

"Executing" the bomber force

A look at how the bomber force operates helps to explain the role played by the Green Pine system. It is commonly believed that several armed SAC bombers are airborne at all times in order to be ready for the outbreak of nuclear war. In fact, SAC has not had bombers on this kind of Airborne Alert since 1968. Instead, to ensure that the bomber force can survive a surprise attack, about thirty percent of SAC's B-1B, B-52 and FB-111 bombers sit on continuous Ground Alert, with bombs loaded, ready to take to the air within minutes of an order to launch.

If these aircraft ever were launched, they would fly to fail-safe points in the North "well outside enemy territory"¹ and await orders either to attack the Soviet Union or to

return to base. As SAC explains it, "SAC aircraft can be launched under positive control without execution. These aircraft would go to certain geographical points and hold until executed or recalled."²

The locations of SAC's fail-safe points have never been made public. However, it is possible to conclude from what is known about SAC's communications systems that these points are probably located very close to the sites of the Green Pine system.³ Thus, for example, the fail-safe point for a B-52 from Griffiss Air Force Base in New York might be somewhere over Baffin Island, within radio range of the Cape Dyer Green Pine site.

The Green Pine system is an important part of SAC's overall communications system, but it suffers from at least one major weakness, which is that the Soviet Union knows where it is located. This means that bombers flying from US bases during a Soviet surprise attack could expect to arrive near the Green Pine sites only some 3-4 hours after the sites were vaporized by direct nuclear strikes. What role, then, is Green Pine expected to play in SAC's communi-

cations? Its contribution to helping the Ground Alert bomber force survive a surprise attack is virtually zero. Most probably, the system is intended mainly to provide communications during a major superpower crisis, at which time SAC would reinstate Airborne Alert and SAC bombers would be airborne near the Green Pine sites continuously.

These Airborne Alert operations, which Canada has agreed to permit in times of emergency,⁴ are often described as purely defensive precautions that would reinforce deterrence when tensions were high. The truth, however, is not as simple as that.

Bombers and the balance

US bombers are commonly represented as unprovocative, almost benign, nuclear weapon systems because they are slow and considered to be unsuitable for a surprise attack. But once the radar-evading "stealth" B-2 bomber and Advanced Cruise Missile are deployed in the next decade, the bomber force may be able to make limited surprise attacks (paving the way for a first-strike, for example) even when Soviet air defences are in full working order.

Furthermore, the bomber force has important follow-on attack roles (which might support a first-strike). It carries a large part of the American "counterforce" capability, including the most powerful weapons and the most accurate weapons in the US nuclear inventory (9-megaton B-53

bombs and air-launched cruise missiles, respectively). Many of these weapons are aimed at Soviet missile silos, weapon storage sites, and command bunkers. The bomber counterforce role is declining in some ways with the deployment of the MX missile and development of the Trident II missile, both much faster counterforce weapons, but it is growing in other ways. According to the Air Force, the SAC bomber force "is being expanded to the maximum extent possible to perform the very difficult relocatable targets (RT) task."⁵ (Relocatable targets, such as mobile SS-24 and SS-25 missiles, are very difficult to attack by missile, so the bomber force plays a crucial warfighting role in this respect.)

Finally, because bombers (theoretically) can be reloaded for numerous attacks and can conduct continuing surveillance missions for Soviet targets throughout the course of the war, the bomber force plays an important part in SAC's contingency plans for a protracted nuclear war lasting several weeks or months.

These factors demonstrate that although the bomber force is not ideal as a first-strike weapon, it remains a very threatening part of the warfighting arms race with the Soviet Union. For this reason placing the bomber force on Airborne Alert, or even launching the normal Ground Alert force, is a provocative act as well as a precautionary or demonstrative one. As one US military official has testified, "airborne alert ... becomes a provocative act since it could be interpreted by an enemy as an intent to pre-empt and thus spark the very attack we are trying to deter."⁶

Green Pine sites, therefore, may play a greater role in threatening the Soviet Union, or in positioning the SAC bomber force for counterforce attacks, than in defending US bombers against surprise Soviet attack. The provocative aspects of the bomber force have led Bruce Blair, an American strategic analyst and former SAC officer, to propose that US bombers continue to operate on Ground Alert, taking off on warning of possible attack, but "not leave the continental United States until retaliation [has] been authorized; they would thus operate like strategic reserve bombers." This policy, part of a general

doctrine of "no immediate second use" of nuclear weapons, would continue to protect the bomber force from surprise attack, while reducing the offensive threat posed by current bomber operating procedures.⁷ Canada could encourage such a policy by closing down the Green Pine sites in Canada and otherwise curtailing Canadian support for SAC bomber operations.

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the truth is not so simple.***

Canada and Green Pine

Canada is deeply involved in the Green Pine system and in fail-safe bomber operations. Six of the Green Pine transmitter sites are in Canada. The land-line communications to these and to the other Green Pine sites run through Canada. Canadian Green Pine sites are "manned by Canadians and maintained through contracts by Canadians."⁸ In the case of the Goose Bay transmitter, which is actually located at the nearby Melville radar site, it is the Canadian Forces that maintain the transmitter.⁹

Unarmed SAC aircraft practice Airborne Alert and "positive control launch" operations in Canadian airspace on a regular basis. Arrangements exist to permit SAC tankers¹⁰ (and possibly some SAC bombers) to operate from Canadian airfields during crisis or wartime. Actual Airborne Alert operations would take place largely in Canadian airspace.

Canadian government statements betray no recognition of the ways in which Canadian support for the SAC bomber force supports a provocative US warfighting posture. Project Ploughshares has called for the elimination of the Green Pine transmitter

sites, and for the elimination of other Canadian support for SAC bomber operations.

Until these support measures are eliminated, Canadian skies will continue to be a major potential staging area for World War Three.

¹ "Positive Control," SAC Fact Sheet, August 1981, quoted in William Arkin and Richard Fieldhouse, "Nuclear weapon command, control, communications", *SIPRI Yearbook 1984*, p. 469.

² Lt. Col. John Alexander, SAC, letter to Peter Chapman, 29 January, 1985.

³ For a variety of reasons, reliable radio communications to the bombers from the United States are limited to a range of about 2000-3000 kilometres. It is very likely, therefore, that the fail-safe points are within this range, which puts them somewhere in the vicinity of the Green Pine system. For the system itself to contribute to these communications, the fail-safe points must be within the roughly 300 kilometre radio range of the individual Green Pine transmitters. For this reason, SAC's fail-safe points are most probably located very near to the Green Pine radio sites. (In these locations they might also have access to NORAD communications systems.)

⁴ Department of National Defence, *Defence in the 70s*, August 1971, p. 31.

⁵ Thomas Cooper, Assistant Secretary of the Air Force, and General Bernard Randolph, Deputy Chief of Staff of the Air Force, "Joint Prepared Statement", *Department of Defense Appropriations Fiscal Year 1987, Part 2*, US Senate Appropriations Committee, 1986, p. 243.

⁶ Quoted in Bruce Blair, *Strategic Command and Control*, 1985, p. 252.

⁷ Bruce Blair, *Strategic Command and Control*, p. 289-290.

⁸ Lt Col John Alexander, SAC, letter to Peter Chapman, 11 June 1985.

⁹ Capt W A Hawkin, "Communications and Electronics at CFS Goose Bay", *Communications and Electronics Newsletter*, 1978, p. 84.

¹⁰ Department of National Defence, *Challenge and Commitment: A Defence Policy for Canada*, June 1987, p. 18.

From the Hill

Simon Rosenblum

Defence Spending

The Financial Post (November 16, 1987) says the "2 per cent real growth plus" formula was forced on the Department of National Defence (DND) by Cabinet. Defence Minister Beatty originally presented Cabinet with his department's "reasonable and responsible" position - average annual increase of 5 - 5.5 per cent, which DND considered necessary to do all the tasks contained in the White Paper. Cabinet rejected that formula and Beatty presented DND's fallback budget - 3 per cent real growth for the first 3 years and 4.5 per cent for each of the remaining 12 years. Cabinet also rejected that, and DND was left with a "2 per cent plus" formula. The Business Council on National Issues fears that the 2 per cent real growth will become a ceiling instead of a floor for defence increases. DND then tried to get Cabinet to fund the Ship Replacement Program (Phase 2) entirely outside the 2 per cent formula. This proposal was sixty percent successful. DND's newly approved budget formula will give it 3 percent real growth annually for the next 5 years and 5 percent real growth later in the 1990s. Under the terms of the new formula, worked out by Finance Minister Michael Wilson and Defence Minister Perrin Beatty, about 60 per cent of the \$3.5 billion Ship Replacement Programme (Phase 2) will be funded above the 2 percent budget formula. That extra \$2 billion will be spread over 10 years and the annual allocations will range from \$100 million to \$300 million.

Nuclear Submarines

While the Conservatives clearly favour the idea of Canada deploying up to 12 nuclear-powered submarines by 2014, the cabinet has not yet committed itself to buying any. There are persistent rumors that some cabinet members don't share Perrin Beatty's enthusiasm for the nuclear submarines. The opposition is supposedly led by External Affairs Minister Joe Clark. Also, Finance Minister Michael Wilson, is said to want to hold defence budget increases to 2 per cent in real terms. The recently

retired head of DND operational research, Dr. George Lindsey, says he is worried that the nuclear sub project may end up on a list of DND blunders. Dr. Lindsey's concern stems from the cost of the project and the fact that there will be a couple more federal elections before the boats are in the water.

Defence Minister Beatty told the Standing Committee on National Defence in November that "we are toying with increasing the fleet of nuclear-powered submarines to more than 12". Rear Admiral John Anderson has been appointed Chief, Submarine Acquisition. He will direct

top brass across the country, speaking to service clubs and local news outlets. Even the companies trying to get the submarine contract realize the nuclear subs are in some jeopardy. Mitch Ewan of CSE Submarine Group says it "would not be a problem" to switch from plans to build nuclear submarines to conventional subs after the next federal election if the need arises. He said CSE could go with a conventional design, "it's the nuclear aspect that makes the project difficult".

INF Agreement

Prime Minister Mulroney sent Presi-



"Sorry, boys. I was told to keep my big mouth shut."

the team of naval experts whose task it is to recommend which design to buy. Five Canadian companies have lined up at the starting gate for the competition to build the nuclear-powered subs. It is said that the federal government will narrow the field down to two finalists by mid-1989 and will select the winner in late 1990, more than a year after the current government's mandate expires.

Meanwhile DND, at Beatty's behest, has begun an aggressive promotional blitz by the military to peddle the nuclear subs. The campaign will send some of the Armed Forces'

dent Reagan a congratulatory message on obtaining an INF agreement. The Prime Minister said: "We in the West must learn an important lesson from this -- that unity, strength and perseverance are recipes for success, not failure." This "hang tough" interpretation of INF negotiations basically ignores the historic importance of Gorbachev's orientation towards the demilitarization of Europe. Unfortunately, there is no evidence of the Prime Minister sending any messages to President Reagan or the NATO allies indicating Canadian disapproval of the proposition that the withdrawal

of ground-launched Cruise and Pershing missiles should be "compensated" for by introducing sea-launched Cruise missiles into Europe.

Another misreading of the INF agreement was made by Joe Clark who said the agreement "may well, by changing the nature of weaponry and arms, cause countries like Canada... to consider whether we have to bear even higher costs for conventional forces and conventional arms".

SALT II

On a more positive note, Prime Minister Mulroney is said to have written privately to President Reagan on four separate occasions between May and November 1986 expressing Canada's belief that the U.S. should continue to comply with the terms of the SALT II treaty.

Liberal Party

Liberal leader John Turner has appointed a new External Affairs critic, Andre Ouellet. Not much is

known about Mr. Ouellet's views on international matters, and he has not served on the House of Commons External Affairs Committee.

During the weekend of February 5-7, the Liberal Party of Canada held a policy conference on Sovereignty and Foreign Policy in the 1990s. Peace and Security was one of the 6 main topics discussed. Individuals from outside the Liberal Party were invited to participate and I had the pleasure of representing Project Ploughshares. Unfortunately, the *Monitor* went to print beforehand, thus preventing a conference report in this issue.

New Democratic Party

In October 1987, the NDP's Federal Council mandated the party's International Affairs Committee (IAC) to examine the NDP caucus response to the Defence White Paper. The IAC solicited views from both within and outside the NDP and met at the end of January to begin its review. It is

expected that the NDP caucus document will come up for some criticism in regards to what critics call its "Fortress Canada" approach to Canadian defence and NDP NATO policy will undoubtedly be discussed.

Nuclear-Weapon-Free Zone

On December 14 of last year the House of Commons voted on NDP MP Neil Young's private member's bill. Young's initiative called on the government to "consider the advisability of declaring a nuclear arms free zone by prohibiting the deployment, testing, construction and transportation of nuclear weapons and associated equipment through and within Canada, the export of goods and materials for use in the construction and deployment of nuclear arms and further, the government should encourage cities, provinces and states throughout the world to take similar action". Although the motion was defeated 93 to 34, there was significant Liberal support for the bill.

At the Table

October-December 1987

Compiled by Carolyn Musselman-Wigboldus

October 1

The US Air Force announces that the Advanced Cruise Missile will be deployed during FY88, and that training of the B-52H crews has already begun. Up to six tests over Canada are planned between January 1 and March 31, 1988, but the present ALCM (air-launched cruise missile) will be tested, not the ACM. Canadian Defence Minister Beatty says no link exists between the INF agreement and ALCM testing in Canada.

October 2-3

The final draft of a treaty creating a Central American Parliament is approved by Central American Vice-Presidents and Foreign Ministers. The Parliament will be an annual forum to discuss and resolve regional problems.

October 13

Costa Rican President Arias receives the Nobel Peace Prize for his Central American Peace Plan.

October 14-15

During a debate on the effects of atomic radiation in the UN Special Political Committee, a Samoan representative asks France why it does not conduct nuclear tests in France. The French representative states that the soil in metropolitan France is "not appropriate for nuclear tests."

October 16

French Defense Minister Giraud states that tactical nuclear weapons will be upgraded in order to compensate for the withdrawal of American INF missiles.

October 22-23

Gorbachev states that the USSR will unilaterally halt work on the Krasnoyarsk radar facility for one year, and would expect the US to take a similar step with the US radar in Scotland. The USSR also offers on-site inspection of two radars that the US considers a possible violation of the ABM Treaty.

October 26

Belgium agrees to the dismantling of its GLCMs (ground-launched cruise missiles) by mid-1989 if the INF agreement is signed. However, Secretary of State Shultz continues to insist that deployment continue until the deal is ratified.

October 27

A captive-carry test of the air-launched cruise missile is conducted in Canada. This is the first test

occurring outside of the regular testing period of January to March.

October 28

The Foreign Ministers of the Central American countries reaffirm November 5 as the date to implement the peace plan. These provisions include amnesty, cease-fire, democratization, an end to military aid to rebels, and denial of use of territory for any country to attack another.

November 3

Former Soviet chief negotiator, Viktor Karpov states that the US and USSR have "an understanding" which would permit a START (strategic arms limitation treaty) in the next year.

November 5

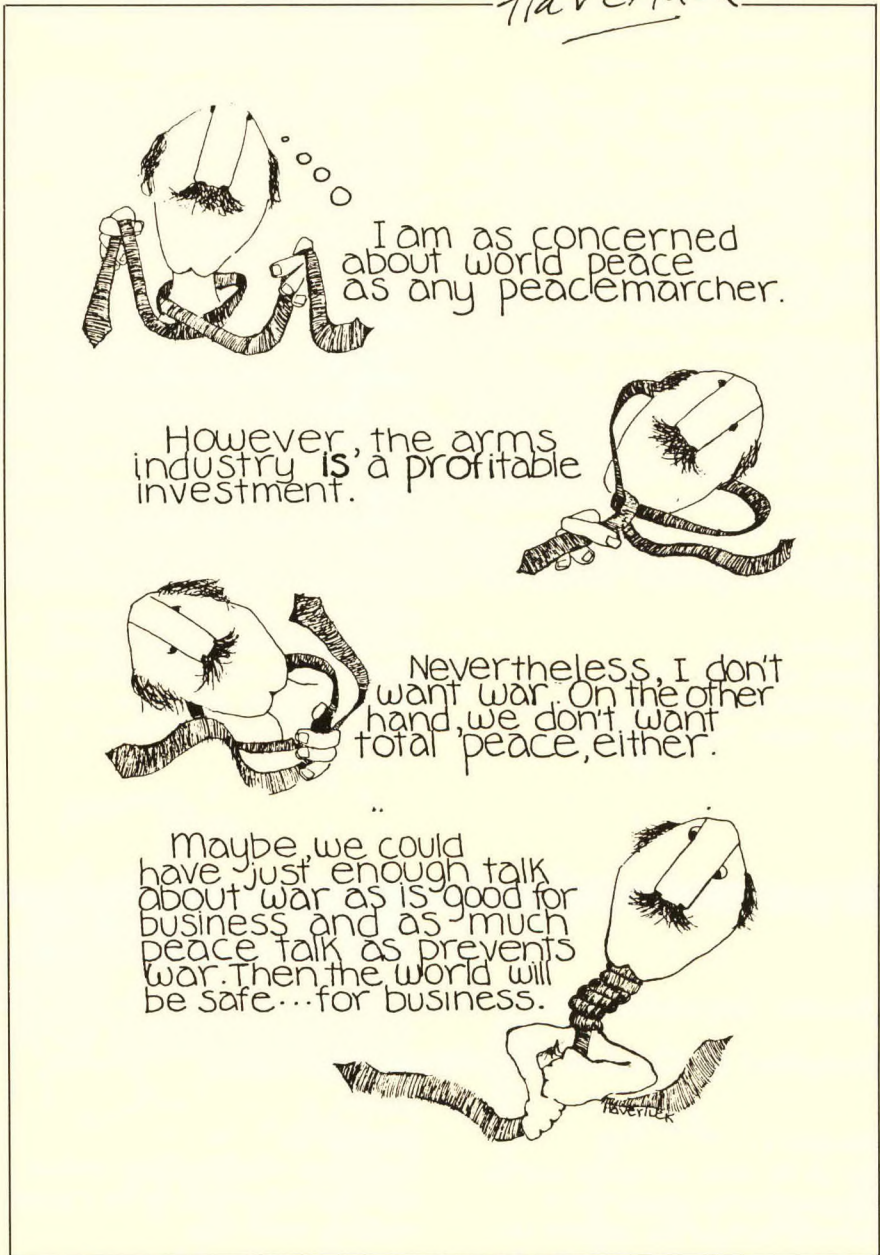
Central American countries comply with peace plan provisions: Nicaragua agrees to negotiate with the contras through an intermediary regarding cease-fire arrangements, and announces the release of 981 prisoners; El Salvador announces a unilateral offensive cease-fire and an amnesty for right-wing death squad members and left-wing rebels; Guatemala announces amnesty for political prisoners. At the same time, the US House approves \$3.2 million in short-term non-lethal aid to the contras, to be distributed by the CIA.

November 7

The International Verification Commission states that the Central American peace plan is working, and accepts Nicaragua's demand that amnesty be linked to an end to contra aid.

November 9

US plans are revealed to test a chemical laser which in the opinion of some experts would violate the ABM Treaty. Labelled Zenith Star, the test is described as the "best bet for testing of an exotic SDI weapon." In a secret meeting, Reagan reportedly noted that since the test would violate the narrow interpretation of the ABM treaty, it should be done in secret. While others urged that the test be done openly and the Soviets informed of the intent to violate the treaty, Reagan said that Congress was "at his throat" because of Irangate and it would be too dangerous to abrogate the ABM treaty at this point.



November 10

Shultz tells the Organization of American States that additional funding for the contras would not be sought unless the Central American peace process collapses before January.

November 15

The US accepts the Soviet invitation to inspect two radar stations. The Joint Chiefs of Staff express concern that this inspection can establish a precedent whereby Soviets could inspect American radars as well.

November 19-20

Soviet military experts visit the American chemical weapons depot in Utah, which houses 42% of the US supply.

November 23

British Prime Minister Margaret Thatcher states that after an INF treaty is signed, NATO's nuclear doctrine will remain flexible response, and therefore nuclear weapons must be updated and developed in order to have the doctrine credible. British Labour Defence spokesperson Davies comments that Thatcher will thus attempt to circumvent the treaty.

December 7-10

President Reagan and General Secretary Gorbachev meet in Washington. The treaty on intermediate-range nuclear forces is signed. Other topics discussed include reduction of conventional and strategic weapons, interpretation of the ABM treaty, human rights, Afghanistan, and the Iran-Iraq war.

Gorbachev also agrees to end all military aid to Nicaragua, contingent on cessation of US aid to the contras.

Discussion regarding a chemical weapons treaty has slowed down, according to Gorbachev, due to the American decision to manufacture binary weapons. He also states that Reagan only wants to ban production at state-owned factories, which would result in elimination of all Soviet factories, and almost no American ones.

December 13

Shultz states that the Administration will seek Congressional funding for Star Wars tests on a case-by-case basis, and no longer insists that Congress accept the broad interpretation of the ABM treaty.

December 18

French President Mitterand states that France will keep its nuclear weapons even if the US and USSR scrap all of theirs.

Peace Shelf

Gandhi Today: A Report on

Mahatma Gandhi's Successors is the result of author Mark Shepard's search for evidence of the survival of Gandhian tradition in India today. His investigation took him through India, where he found that individuals, groups and whole movements are actively involved in work based on Gandhian principles of active non-violence. Shepard finds an individual acclaimed as a saint who collected over 4 million acres of land given as gifts for the poor; a People's Court that tries cases of murder and government corruption; a nationwide movement of villages which hold all land in common and make decisions by unanimous consent, and many other examples. He then broadens the scope, and considers groups in other countries of the world working to uphold the ideals of Gandhi. The book is available from Simple Productions, 12 East 15th St., #3, Arcata, CA 95521

Nuclear Pie: 14 Fables for Our Time

by Calgary writer Barbara Weaver is a collection of short fiction pieces each of which illustrates an important aspect of the war problem. The author, a junior high teacher and peace activist, has planned each story to look at a single "bite sized" topic. Though she started with nuclear disarmament as her central theme, Ms. Weaver soon began to see that "international development and disarmament are truly interdependent" and added stories on wider north/south themes as well.

Each fable is short and eminently readable -- simple enough for use by teenagers as well as by adults. Groups in Calgary have used *Nuclear Pie* as a successful fundraiser.

Available from:
Brenda Weaver
2316 Cherokee Dr. N.W.
Calgary, AB, T2L 0X7



Defense Spending and the Economy: Does the Defense Dollar Make a Difference?

For years, a debate has raged about the effect military spending has on a country's economy. This debate has been particularly intense in the US since President Reagan took office in

1981, and has continued while defense outlays increased from \$134 (US) billion to \$273.4 billion in FY 1986.

Now a study by the Defense Budget Project, an independent, non-profit research organization, challenges assumptions made by both sides of the debate, and states that both the Defense Department and its critics have overstated the effects of military spending. They contend that "By and large, major changes in the US economy appear to be far more strongly influenced by broader events and economic developments--national and international--than by variations in the level of defense spending." It is stated that there is "at the most, mixed evidence with respect to the impact of defense spending on civilian research and development." "The central economic issue is less whether defense dollars are harmful or beneficial to the economy than it is the kind of an economy that one wants, employing whom, producing what."

America, God and the Bomb: The Legacy of Ronald Reagan

Fred Knelman's update of the earlier *Reagan, God and the Bomb* examines how the military and foreign policies of the Reagan Administration have developed under the influence of the New Right, the born-again Religious Right, and the military establishment. The power of each in affecting policy has resulted in "an administration driven by ideology and theology, inclined toward Armageddonist prophesies, viscerally anti-Soviet, and

bent on fighting, winning and surviving a nuclear war, if necessary."

Knelman discusses weapon strategies and the consequences of nuclear war, using recently declassified US government documents. He describes the nuclear warfighting "secret agenda" of the White House, and sees difficulty in changing present trends. Not only is the nuclear arms infrastructure firmly in place, and the Right continuing its active opposition to arms control and reduction, but four of the six Republican candidates are on record as opposed to the INF treaty and detente in general.

Order from:

New Star Books,
2504 York Ave.,
Vancouver, BC
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Story telling, lectures and slide presentations are the specialty of **Josie Wallenius**, a Ploughshares local member from Northwestern Ontario. Josie's topics are as varied as the peace movement itself: Greenham Common, Nicaragua, visits to Libya and the USSR. Most prominently she talks about the tactics used to repress political debate in North America. As she says, "War needs two things, weapons and an enemy. The peace movement has spent itself on protesting the weapons, because if you protest the concept of the enemy, *you* are called an enemy...."

Josie's presentations are always informative, stimulating and passionate.

Contact her at:
RR#7, Thunder Bay, ON
P7C 5V5
(807) 964-2025

(Continued from page 3.)

Christian East Beirut and Moslem West Beirut as they passed through. The civil war has killed more than 130,000 people and disabled at least 30,000 since its outbreak in 1975, and the March is to draw attention to the effects of the war, and encourage Lebanese people to demand an end to the violence.

For more information about Disabled Peoples' International, contact the Development Office at 504-352 Donald St., Winnipeg, MB R3B 2H8.

Canadian subs for Pakistan?

The Department of External Affairs sees "no legal impediment" to a Canadian firm selling submarines to the Pakistan Navy, according to the January 30 edition of *Jane's Defence Weekly*. As reported in the last issue of the *Monitor*, **Submarine Services Inc** (SSI) of Halifax applied to the department to export hybrid nuclear/conventional submarines to Pakistan. The proposed sale is worth \$1.8 billion.

Canadian military export guidelines do not provide a blanket prohibition of military sales to countries like Pakistan which have bad human rights records. Instead, the government has expressed its willingness to allow such exports if "there is no reasonable risk that the goods would be used against the civilian population." At the same time the guidelines do prohibit military sales to countries in conflict. Yet it is clear that the submarine purchase would heighten tensions between India and Pakistan, two countries that have been in regular conflict since their independence almost 40 years ago.

The *Jane's* report also notes that the SSI hybrid submarine will make

use of a small nuclear power reactor designed by **Energy Conversion Systems Inc** (ECS) of Ottawa. The reactor or "plug" can be added or retrofitted to conventional submarines to increase underwater endurance by providing additional propulsion and electrical power, including that needed to sustain an internal atmosphere. However, in a telephone interview with Project Ploughshares in October, the engineering vice-president of ECS, Mr. Davidson, denied that ECS was involved in the Pakistan deal. At that time he said that "to the best of [his] knowledge there was no connection" and that, when ECS staff had discussed potential customers for their system, Pakistan was not one of them.

Nevertheless, the External Affairs' go-ahead means that SSI can now proceed with contract negotiations with Pakistan. Any resulting contract would then be submitted to the Cabinet of the Canadian government for final approval. Since Pakistan is also negotiating for submarines with several other countries, there would be pressure on the Cabinet for quick approval.

The Amazing (Sargeant?) Kreskin

The US National Academy of Sciences has recently completed a study of US Army proposals for mind weapons using extrasensory perception (ESP) and other powers.

According to an NBC news report, "an unnamed Army officer told the Academy he wanted a battalion of what he called warrior monks whose powers would not only include ESP, but levitation and walking through walls."

The Academy reported that there is no evidence that ESP really exists.

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