

April 2001
**Programme for Promoting Nuclear
Non-Proliferation, Newsbrief, Number 53**

Citation:

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Summary:

A compilation of the latest news, events, and publications related to nuclear weapons and nuclear non-proliferation. The "Newsbrief" was produced by the PPNN and personally edited by Ben Sanders.

Credits:

This document was made possible with support from Carnegie Corporation of New York (CCNY)

Original Language:

English

Contents:

Original Scan

PROGRAMME FOR PROMOTING NUCLEAR NON-PROLIFERATION

Number 53

NEWSBRIEF

1st Quarter 2001

Editorial Note

Newsbrief 52 opened with the announcement that it might be the last one to come out, at least for some time. It has since turned out to be possible to produce one more issue, albeit one that, in its size and scope, is somewhat more modest than recent issues have tended to be. This one, however, is certain to be the last.

Issue Number 52 contained the explanation why PPNN would be obliged to stop publishing the Newsbrief, but it also said that efforts were still being made to find funds for the production of some further issues. It has become clear, however, that if more money could be raised, it would at best be enough for the physical production of another issue, or even two, but would not cover major items of expenditure such as salaries and office expenses. Evidently, therefore, further attempts to find funds for the production of more issues of the Newsbrief would be pointless.

The previous issue listed the grant-making organisations whose financial support made the Newsbrief possible. It also referred to the many people and organisations who have contributed information for use in the Newsbrief. Once again, the editor wishes to express gratitude specifically to the United Nations Department for Disarmament Affairs and to the Secretariat of the International Atomic Energy Agency, for the help they have given him; to Rebecca Johnson, Executive Director of the Acronym Institute, and to the invaluable Richard Guthrie. It is also fitting once again to mention the support and encouragement received from a wide range of readers: government officials, international civil servants, persons in industry, NGO representatives, academics and researchers, as well as private members of the public with a personal interest in the topics with which the Newsbrief used to deal. They have helped to make the work worthwhile.

At this point the editor wishes to articulate his three reactions to the termination of the Newsbrief. They are regret, resentment and relief. Regret, at the demise of that publication, after fourteen interesting and instructive

years. Resentment, at the inability of those who would have the means to help the work go on, of recognising the value of the Newsbrief to those engaged in the area of non-proliferation, and of the needs it has met and should meet further. And above all relief, that after these few months he need not follow, nor try to report dispassionately on, the insidious antics of the leaders of the one country that could and should do most to promote nuclear disarmament and non-proliferation, who appear set to undo decennia of achievement in those fields, heedless of the harm to world peace and security.

Previous issues of the Newsbrief contained the invitation to readers to submit comments and amplifications, for possible publication in a following issue. Although publication is no longer possible, the editor would be happy to receive any comments readers of this last Newsbrief issue might wish to send him, and to respond direct.

The current Newsbrief covers the period 1 January to 31 March 2001. Unless otherwise indicated, dates (day/month) refer to 2001. Where reference is made to an uninterrupted series of items from a daily newspaper or a news agency, only the first and last dates of the series are noted. For example, "12-17/2" following the name or symbol of a particular publication means that use has been made of items appearing there on each day from 12 to 17 February 2001. Names of publications that are referred to often are abbreviated; a list is given on the back page. Many of the references to activities of the International Atomic Energy Agency were found in the Director General's statement of 19 March to that body's Board of Governors.

I. Topical Developments

a. Nuclear Non-Proliferation

- In February, **China** and **India** held a second round of talks on issues of nuclear proliferation. Reportedly, one issue under discussion was the supply by China of nuclear and missile technology to **Pakistan**. (AFP, 8/1; R, 8/2, 9/2)

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- In early January, a bipartisan panel sponsored by the **United States** Department of Energy (DoE) issued a report on the results of US efforts to prevent the spread of Russia's nuclear material. The report, *A Report Card on the Department of Energy's Nonproliferation Program with Russia*, concluded that the existing scope and management of US programmes leave an unacceptable risk of failure and a potential for catastrophic consequences, mainly as the result of under-funding. The report, pointing out that the "new President and the 107th Congress face the urgent national security challenge of devising an enhanced response proportionate to the threat", stated that over the next eight to ten years, at a cost of \$30 billion, the quantities of excess material in Russia could be brought under effective control and the threats posed by such materials be reduced drastically. According to the report, there are more than 1,000 metric tons of highly-enriched uranium (HEU) and at least 150 metric tons of weapons-grade plutonium in Russian nuclear-weapon facilities. The report recommended, among other things, that the purchase of HEU from Russia should be accelerated; that existing disposition commitments should be accelerated by using 100 metric tons of excess Russian plutonium as mixed-oxide (MOX) fuel in civilian reactors; and that funding should be increased for existing programmes as part of an overall plan. It also proposed that within the US Administration a high-level position should be created to supervise the effort and coordinate work among departments. The panel's first conclusion was that "[t]he most urgent unmet national security threat for the United States today is the danger that weapons of mass destruction or weapons-usable material in Russia could be stolen and sold to terrorists or hostile nation states and used against American troops abroad or citizens at home". It also stressed the need to prevent the outflow from Russia of scientific expertise.

At the time this issue of the **Newsbrief** went to press, there were contradictory reports from Washington regarding the effect the Bush Administration would give to the panel's recommendations. Initial reports had suggested that the White House draft budget for fiscal year 2002 would largely ignore its recommendations and instead of increasing the allocations for Russian nuclear non-proliferation activities would cut them drastically. Reportedly, the Budget Office had overridden the protests of the newly appointed Secretary of Energy. As reported, in allocating DoE funds, the White House saw the need to upgrade aging US nuclear-weapon plants, which supposedly have a \$800 million backlog in maintenance, as the first priority. Washington sources also recalled in this context the question of Defense Secretary Donald Rumsfeld, why the US should help Russia pay for nuclear security, and his suggestion that such assistance might enable Russia to spend more on armaments.

According to several media reports, in which mention was made of "a budget battle" between DoE and the White House, which the later had won, the budget appropriation for Russian nuclear non-proliferation activities would be cut by a total of about \$200 million from the amount proposed under President Clinton, and there were rumours of possibly greater cuts later on. Reputedly, among elements of the programme, funding for work to improve security at Russian nuclear facilities, for which DoE had sought an increase to \$226 million, would be cut to \$140 million. The Russian Nuclear Cities Initiative,

which aims at finding alternative employment for nuclear scientist and communities, was to be cut from the proposed \$30 million to approximately \$6.6 million. The Nuclear Materials Protection, Control and Accounting Program, which is intended to improve the security of fissionable material and which was funded at \$169.7 million, would be reduced by \$30.9 million. The effort to dispose of surplus plutonium was said to be subject to criticism. The funds available for this activity were expected to fall far short of the amount said to be needed to start implementing the US-Russian cooperation agreement concluded in 2000. Meanwhile, the Administration was said to have begun a thorough review of the entire programme, in which the Departments of State, Energy and Defense and the Budget Office were involved; this was expected to take several months. A hint at its probable direction was thought to have been found in Mr. Bush's remark at a press conference on 29 March, that there was need for a review to make sure that "money going to the Russian program ... is effective". White House officials were quoted as speaking of "cost-benefit ratios" in light of America's interest, and some said they expected that the review would result in a substantially different approach. Supporters of the Russian programme, including ex-Senator Nunn, one of the initiators, and a number of members of Congress, expressed anxiety at the prospect of possible cutbacks. A senior Bush aide told the US Senate that the programme would benefit from a "bold review" and a "clearer vision of goals, strategy and priorities".

A consortium of private-sector companies has asked the US Nuclear Regulatory Commission (NRC) for permission to construct a MOX fuel fabrication facility at DoE's Savannah River site. The NRC is preparing an environmental impact statement to support its license review for the construction. The plant is intended to help meet US obligations to dispose of 34 metric tons of excess weapons plutonium.

In early January, a report issued in the US by the Institute for Energy and Environmental Research, said that reprocessing and MOX use for either electricity production or weapons disposition should be stopped immediately on economic and non-proliferation grounds. The report recommends abandoning the plan under which both Russia and the US would dispose of 34 metric tons of excess weapons plutonium. It proposes that the G-7 nations should offer to buy Russia's surplus plutonium and pay to immobilise it. It also urges the US to immobilise all of its surplus military plutonium, and it pleads for an end to the use of MOX fuel also in France, Japan and elsewhere on non-proliferation, environmental and economic grounds.

In Japan, meanwhile, the Atomic Energy Commission has warned that unless reactors scheduled to use MOX fuel load as planned, the country's thermal plutonium recycling programme may be set back by the resulting plutonium surplus. While, reportedly, 16 to 18 of Japan's 51 nuclear power reactors are hoping to start using MOX fuel by 2010, a number of prefectural governors are refusing to allow the fuel to be loaded, even when all requirements have been met. These refusals are blamed on the loss of public confidence in the safety of MOX fuel use, following a criticality accident at the Tokaimura nuclear fuel complex and the falsification of quality-control data with regard to BNFL-produced MOX

fuel for a power reactor of the Kansai Electric Power Co., both in 1999.

(NYT, 4/1, 11/1; SF, 8/1, 15/1, 5/3, 12/3; NW, 1/2; WSJ, 16/3, 30/3; **Atoms in Japan**, February; **Energy Daily**, 16/3; NYT, 29/3; **White House Press Conference**, 29/3; WP, 30/3)

- At a meeting of the **Nuclear Suppliers Group** (NSG), in January, the majority of members are reported to have objected to the Russian decision to supply low enriched fuel to India, for its Tarapur nuclear-power station. In doing so, Russia is considered to violate its undertaking not to conduct nuclear commerce with non-nuclear-weapon states (which India is considered to be in terms of the Non-Proliferation Treaty) that have not accepted full-scope safeguards. A senior official of the US Department of State has called Russia's action "egregious". The issue is seen in Washington as part of a pattern of Russian actions that tend to undermine the non-proliferation regime. (NW, 1/2; SF, 12/2; direct information. See also below, under Iran, p. 4, and NMD, pp. 8-15.)
- The head of **Ukraine's** government commission in charge of military manufacture has denied that his country was considering producing intercontinental ballistic missiles (ICBMs) jointly with Russia. Reportedly, a junior defence minister had said that Ukraine's President Kuchma would discuss a proposal for the joint manufacture of nuclear-capable ICBMs with Russia's President Putin, during the latter's one-day visit to Kiev, in February. (AFP, 12/2)
- On 11 March, the Nuclear Non-Proliferation Treaty (NPT) Exporters' Committee, also known as the **Zangger Committee**, marked its 30th anniversary. The Committee was formed to interpret the meaning of the reference in Article II.2 of the Treaty to "especially designed or prepared equipment or material for the processing, use or production of special fissionable material". It currently has 35 members. Chairman is Dr. Fritz Schmidt of Austria. (Zangger Committee **Press Statement**, 12/3)

b. Nuclear Disarmament and Arms Limitation

- In the **United States** a comprehensive and highly classified review has been ordered of the nation's nuclear arsenal, as a first step towards unilateral cuts in warheads and missiles. The move follows the undertaking made last year by George W. Bush, when he was campaigning for President. Officials say that it is intended as part of a new strategic doctrine and a new approach to arms reduction which, the Bush White House team believe, better meets the realities of the post-Cold War era than the arms-control-through-treaties approach of previous Administrations. Under the new approach, the emphasis on stand-off through deterrence would be greatly reduced, and replaced by reliance on defence. Reportedly, besides involving a review of nuclear strategy, the method of selecting targets, the nuclear stockpile and the new and potential threats to the US, the review is also intended to consider whether nuclear weapons can be removed from their present high-alert status. According to authoritative estimates, the US would be able to achieve any conceivable military mission with 1,000 to 1,500 strategic nuclear warheads.

The **Russian Federation** is known to be concerned that unilateral cuts in nuclear weapons could reduce pressure

for negotiated, binding treaties, providing for verification, and would give the US more freedom to deploy an anti-ballistic defence system.

(R, 26/1; NYT, 8/2; direct information)

- Also in the **United States**, George W. Bush has nominated John Bolton to be Undersecretary of State for Arms Control, Nonproliferation and International Security. The post was previously occupied by John Holum, following the abolition of the Arms Control and Disarmament Agency. Mr. Bolton was Assistant Secretary of State during the Administration of Bush Sr. He is described as a "right wing extremist" whose previous utterances include the statements that it should be made clear to the DPRK that the US is indifferent as to whether it ever has "normal" diplomatic relations with Pyongyang, that the "CTBT is dead" and that the supporters of that Treaty are "misguided individuals following a timid and neo-pacifist line of thought". He has also been heard to make harshly contemptuous remarks about the UN. Bolton was strongly endorsed by Senator Jesse Helms as "the kind of man with whom I would want to stand at Armageddon". At his confirmation hearings, when Democratic Senators were reported to have expressed surprise and skepticism that the views the nominee expressed were more moderate than those he had aired in the past, Bolton said he had changed his mind. (NYT, 30/3; Direct information)

c. Nuclear Testing

- A report prepared on behalf of the Clinton Administration by the former Chairman of the **United States** Joint Chiefs of Staff, General John Shalikashvili, has concluded that the country should ratify the Comprehensive Test Ban Treaty (CTBT). The report includes a number of recommendations for measures such as strengthened verification, stronger efforts to maintain the American nuclear arsenal, and periodic reviews by the US Senate and the Administration to determine whether the Treaty is still in the national interest. The issue has been a subject of discussion during the confirmation hearings of the candidates for Secretaries of State and of Defense in the new Republican Administration. The then still prospective Secretary of State, General Colin Powell, who originally came out in favour of ratification, stated during his hearings that George W. Bush would not try to get the Senate to reverse its earlier rejection of the CTBT; Powell said that the Treaty was "flawed" but gave no details. Secretary of State-designate Donald Rumsfeld spoke strongly against the Test Ban, which he said should preclude the US from developing new nuclear weapons.

(NYT, 5/1, 7/1; WT, 12/1; R, 17/1; **Trust & Verify**, January/February)

- Reports from Washington speak of disagreement among intelligence officials and nuclear analysts about the nature of the ostensibly 'non-nuclear' tests the **Russian Federation** is conducting at Novaya Zemlya. Some, especially among the American intelligence community, who are seen as inherently suspicious of Moscow, claim that rather than sub-critical and non-nuclear, these are in fact small nuclear explosions. Scientists, on the other hand, by and large seem to reject these allegations as unproven and irresponsible. The US State Department is said to be of the same view. All sides, however, speculate

that the work going on at Novaya Zemlya seems to go beyond mere sub-critical testing. (NYT, 4/3)

d. Nuclear Trade, International Cooperation and Nuclear Export Issues

- The bipartisan panel set up by US Secretary of Energy Bill Richardson to review projects run by DoE to prevent the spread of nuclear material from the **Russian Federation**, has expressed particular concern about the trade in dual-use technologies between that state and the **Islamic Republic of Iran**. The panel's report notes that while continued cooperation is needed between the Russian Federation and the US on a wide range of non-proliferation programmes, if "Russian cooperation with Iran continues in a way that compromises nuclear non-proliferation norms" this will have a major adverse effect on such cooperation. A senior US State Department official said that Russian cooperation with Iran was "clouding" relations between the US and the Russian Federation and may have a negative impact on cooperation in such issues as plutonium disposition. The official claimed that Iran was using the Bushehr reactor project to cover acquisition of sensitive nuclear technology from Russia. A group of prominent American non-proliferation experts has written a letter to Administration officials urging them not to cut important non-proliferation activities with Russia in retaliation for its cooperation with Iran. They pointed out that it would be a grave error to link programmes that serve US security with Russia's exports to Iran, as that would undermine the goal of slowing Iran's nuclear weapons programme and would increase the chance that Iran and other proliferating states could acquire weapons material stolen from Russian facilities.

In mid-March, on the occasion of a visit to Moscow of Iran's President Khatami, Russian President Vladimir Putin announced that his country would resume sales to Iran of defensive arms, and would complete the construction of the Bushehr nuclear power plant. The news caused concern in Washington, but led to what the media dubbed a relatively "muted" reaction from the US State Department. Reportedly, senior Russian officials reiterated the argument that there were no legal obstacles to the arms sales and that Iran is subject to full-scope IAEA safeguards, so that Russia is fully entitled to assist in the completion of Bushehr. It appears, however, that in Russia itself doubts have been voiced about too close a relationship with Iran, which, as some newspapers claim, might become as much of a threat to Russia, as to the US.

Russian officials have meanwhile given an assurance that laser equipment which the US had feared might be provided to Iran, to be used there in a uranium-enrichment programme, will not be exported and has been returned to the institute at St. Petersburg where it was manufactured. The matter had for several months been under discussion between Moscow and Washington.

(NYT, 11/1, 13/3, 15/3, 16/3; SF, 12/2; NW, 8/3; R, 12/3; PIR Center Press Release, 16/3. See also above under a. **Nuclear Non-Proliferation**, and **Newsbrief** no. 52, p. 6.)

e. IAEA Developments

- At its March session, the Agency's Board of Governors recommended that applications for membership of the Agency by the Republic of **Botswana** and the **Federal Republic of Yugoslavia** (FRY) should be approved by

the General Conference at its Forty-Fifth regular session. This will, it is hoped, permit the Agency to take action about the old research reactor at the nuclear centre of Vinca, near Belgrade, which is said to be plagued by poor materials management and lack of funds. The Agency is said to hope that Yugoslavia will consent to decommission the reactor and return the fuel — almost 50 kg of fresh, 80 per cent-enriched uranium — and the low-enriched uranium (LEU) that is also at the site, to Russia, the original supplier, assuming that the latter is prepared to accept it. (IAEA Documents GOV/2001/762 and GOV/2001/862; NW, 22/3; direct information)

- Dr. Mohamed ElBaradei told the Agency's Board of Governors in March, that there are still 53 states that have not yet fulfilled their commitments under the NPT to bring into force **safeguards agreements** with the Agency. The number of **Additional Protocols** approved by the Board still stands at 57; 19 of these have entered into force or are being provisionally applied. The Director General stressed once again that only in states with a safeguards agreement and an Additional Protocol can the Agency provide comprehensive and credible assurance about the fulfillment of non-proliferation obligations.
- **The term of office of Dr. Mohamed ElBaradei** will expire on 30 November. During the March meeting of the Board of Governors, the Chairman reported on the outcome of his informal consultations on the matter. (IAEA Documents GOV/2001/6, 12/2)

f. Peaceful Nuclear Developments

- In the **Czech Republic**, the new Temelin-1 reactor was taken off-line on 17 January for backfits to a turbine and other adjustments, further delaying full commercial operation. It was reconnected to the grid on 27 February, to operate at 30 per cent of capacity for about ten days and then at just under half. On 8 March it was shut down once again, for more modifications to turbine control valves. Meanwhile, the Czech government has been cooperating in a 'dialogue' with the European Commission (EC) and Austria to address environmental and safety issues raised by that country. In December 2000, the Czech Republic agreed with Austria that a safety review and an environmental impact assessment (EIA) would be made, in return for which Austria had consented to stop blocking the borders and to withdraw its threat to block talks on Czech accession to the European Union. In February, at the request of the Czech Republic, the IAEA sent an Operational Safety Review Team (OSART) mission to the plant. It will follow this up in June with an International Regulatory Review Team mission and in October a Design Review of the plant modifications will be made. The safety review and the EIA are to be ready by late May or early June, when the reactor is supposed to start commercial operation, but Austria seems to be agitating for a later date.

At the time this **Newsbrief** issue went to press, there were reports that Vienna was not yet fully living up to its promise to lift the border blockade. It was also reported that Austrian nuclear opponents, who were enraged by the start-up and said they were considering "sharper actions" in retaliation, had engaged a prominent US lawyer to sue Westinghouse and the Temelin operator to obtain extensive documentation on the safety of the reactor in

response to their alleged failure to obtain sufficient insurance against damages from a nuclear catastrophe.

(NW, 4/1, 18/1, 25/1, 8/2, 15/2, 22/2, 1/3, 15/3; NYT, 10/2)

- Once again, in **Germany**, the issue of using high-enriched uranium (HEU) in the FRM-2 research reactor of the Technical University of Munich has arisen. The Federal Minister of Environment and Nuclear Safety, Trittin, of the Green Party, has long wished the reactor to convert to LEU, but it is thought unlikely that this will stand in the way of eventual licensing.

The German Federal Office for Radiation Protection has approved an application for the shipment of spent fuel from the Neckarwestheim nuclear power plant to the Sellafield reprocessing plant of British Nuclear Fuels Ltd (BNFL). This follows the deal with the German government allowing reactor operators to honour their contracts with overseas processors (France and the UK) until the year 2005. In late March, large numbers of anti-nuclear demonstrators, protesting against the transport of nuclear waste returned from reprocessing in France, tried to prevent the passage of railroad cars on their way to storage in Gorleben. Three days of demonstrations led to several clashes with security forces in France, where 1,200 police were deployed along the route, and Germany, which had mobilized 15,000 police officers. German security personnel carried out 700 arrests. On 29 March the consignment reached its destination.

(NW, 4/1, 25/1; SF, 29/1, 5/2, 26/3; BBC Worldnews, 27/3; NYT, 27/3, 28/3, 30/3)

- A shipment of 28 MOX fuel assemblies fabricated in Belgium for **Japan** left the French port of Cherbourg in mid-January. Reportedly, the assemblies were carried in two of the ships owned by BNFL, that are especially equipped for nuclear transports: *Pacific Pintail* and *Pacific Teal*. The ships, which carry light armaments and an armed unit of specially trained anti-terrorist police, were expected to sail around the Cape of Good Hope and to arrive at the port of Kashiwakazi after a trip of about two months. Environmental and anti-nuclear groups tried to delay the departure. Attempts by 'Greenpeace' activists to prevent *Pacific Pintail* from setting sail were frustrated by French navy commandos.

On 21 February, the BNFL vessel *Pacific Swan* docked at the port of Mutsu-ogawara to deliver 192 containers with vitrified high-level radioactive waste which will be stored at the nearby facility of Rokkasho. This is said to have been the sixth, and so far largest, shipment of high-level waste to Japan. The waste had been treated at La Hague, France, and was shipped from Cherbourg in December 2000.

(SF, 22/1, 19/2)

- In mid-January, **Taiwan's** Supreme Court ruled that the island's largely anti-nuclear government acted improperly when, in October 1999, it determined that construction of a new nuclear power plant at Kungliao was to stop. The Court stated no such decision should have been taken without approval from the legislature. Following up on the decision, the legislature, in which the opposition Nationalist party has the majority, voted 134 to 70 that construction should be resumed. The Prime

Minister responded that he was not obliged to comply with the vote, but in an attempt to reach a compromise has offered to put the issue to a referendum. Apparently, this offer did not suffice to stop pressure by the opposition, and on 14 February the cabinet reversed its stand by allowing construction of the station to resume. The nuclear issue has long been the subject of deep political disagreement in Taiwan, and was an important issue in last year's general election. (NYT, 16/1, 1/2, 3/2; NW, 15/2. See also *Newsbrief* 52, p. 8)

g. Nuclear Policies and Related Developments in Nuclear-Weapon States

- The period under review began with a month of speculation about possible changes in US policy towards the **People's Republic of China** (PRC) and with tense exchanges between Beijing and Washington over a report of the US Department of Defense (DoD) that accused China of selling ballistic missiles and nuclear technology in violation of non-proliferation agreements. Beijing called the accusations "groundless and highly irresponsible". In February the head of a Chinese firm admitted in a US court that he had violated the Arms US law by attempting to arrange for the export of American-made gyroscopes to be used in missiles to be shipped to the PRC, without US-government approval.

Extensive coverage in US media of subsequent allegations that Chinese technicians had been helping Iraq update its ground-to-air defences added to criticism of Beijing especially among Republican politicians, while the reaction from the US Department of State struck observers as moderate. The issue appeared to have been put to rest by the PRC's assurances, reported by the US Secretary of State to the Senate, that it had ordered companies suspected in Washington of having worked on the reconstruction of Iraq's air defences to halt their activities. (see also under Iraq, pages 22–23)

Although some experts had expressed doubt that the policy of the new US Administration towards China would differ essentially from that followed by the Clinton White House, statements by senior Republican politicians were generally taken as signs that the Bush Administration would adopt a harder attitude towards Beijing and give more support to Taiwan. An article in the conservative daily *Washington Times* by Senator Jesse Helms, Chairman of the US Senate Foreign Relations Committee, calls for more support to Taiwan, failing which there would be an increased threat of war with Mainland China. In March, Helms' Committee issued a report that reached the conclusion that Taiwan urgently needed access to advanced weaponry, and called for close collaboration between the Taiwan and US military.

Against a background of reports that the PRC was reinforcing its navy, incorporating four large Russian-built destroyers armed with state-of-the-art anti-ship missiles capable of confronting US forces, that it was contemplating building an aircraft carrier along the lines of the Soviet *Minsk* class, and was adding missiles to the forces already deployed against Taiwan, Taiwan's President was reported to have sent a renewed request to the US for four state-of-the-art guided-missile destroyers of the Arleigh-Burke class, equipped with the highly sophisticated 'Aegis' radar system. Taipei also announced it wished to buy an array of high-tech missiles as well as submarines and submarine-hunting aircraft.

Republican sources around the Bush Administration claimed that under the Taiwan Relations Act of 1979, the US was obligated to help Taiwan maintain its defences. The Clinton Administration had already once declined to sell Taipei the naval equipment it was asking for, and instead had been planning to supply it with less powerful ships. Beijing warned that it saw the Aegis radar as a forerunner of a missile-defence system, and would strenuously object to its sale to Taiwan. US newspapers noted that several officials in the Bush Administration, including the new Undersecretary of State for Arms Control [*sic*], already in 1999 had urged the US government to be more rigorous in its defence of Taiwan. Some military experts noted that the Aegis ships needed much support and expressed doubt that Taiwan's navy could operate them effectively. An American naval expert commented that in case of conflict the US Navy with its own Aegis radar, would come to the aid of Taiwan, which therefore did not itself need to acquire such equipment.

As this **Newsbrief** went to press, a decision on the equipment to be sold to Taiwan was expected at any moment. Shortly before, China's Deputy Prime Minister Qian Qichen visited Washington, reputedly to impress upon officials there China's opposition to the sale to Taiwan of highly sophisticated weapons, in particular the guided-missile destroyers carrying the Aegis radar system. Qian was understood to have warned that such a sale "would change the Taiwan issue to a military solution" and to have said that if George Bush were to approve the sale, very serious strains would develop in US-PRC relations. Shortly afterwards, China's President Jiang Zemin issued a similar statement. US government sources indicated that Qian's discussions in Washington — during which, reportedly, Mr. Bush referred to the US' obligations under the Taiwan Relations Act but also said no decision on arms sales to Taiwan had yet been taken — had not had a deep impact on the Administration's plans. The State Department spokesman was quoted as having said: "we don't consult with China on our arms sales to Taiwan; we sell Taiwan what we think is appropriate and necessary to meet their legitimate defense needs". Shortly before the Administration's decision became known, there were media reports which claimed that it had already been decided not to supply the Aegis-destroyers, or that, as a possible compromise, the sale might be approved in principle, but delivery postponed until next year, in the understanding that this would not take place if the PRC slowed its military build-up against Taiwan and froze or reduced the number of missiles aimed at that island. However, no sooner was this prognosis published when a report came from Taiwan that a confidential review by senior US Navy officers had concluded that that the island needed to receive substantial amounts of sophisticated weaponry, including the Aegis ship-borne radar system and the advanced Patriot (PAC-3) anti-missile system.

As appeared to be the case in respect of other important foreign-relations issues, the issue of supplies to Taiwan was said to be a subject of disagreement between Secretary of State Powell on the one hand, and Vice-President Cheney and Defense Secretary Rumsfeld on the other. The former were said to give preference to a cautious approach to Taiwan that would avoid a worsening of relations with the PRC; the rumour that Taiwan would not get the ships it had asked for was seen in the conservative press as a "victory" for Powell. The

latter group, reportedly encouraged by American US industry and the US Navy, were understood to take a "hawkish view" of China, in which strong support for Taiwan was a priority. At the end of March, the commander of US forces in the Pacific area, Admiral Blair, told the US Senate that in the "near term" the balance of forces across the Taiwan straits was stable, and what was needed in the first place was to de-emphasise those things that increase tensions. At that time, too, it was reported that Defense Secretary Rumsfeld was planning, as part of his over-all defence review, "to press dramatic changes in US military strategy", with increased emphasis on China. The report did not give further details, but a Russian source claimed to know that Rumsfeld was stressing the possible use of 'stealth' bombers against the "China threat". This issue of the **Newsbrief** was being finalised two days after an American military observation aircraft collided with a PRC jetfighter and made an emergency landing on a Chinese island. The fighter had crashed. The US aircraft, its crew and its electronic equipment were being held by the Mainland authorities and the US government was exerting pressure for their early release. It was too early to assess the likely impact of the situation on Sino-US relations and on America's strategy in the region, but there were predictions in the international press that it might help move the Bush Administration closer to giving Taiwan substantial military assistance.

In mid-January there were reports that Taiwan had warned that it was be ill-prepared for any air or missile strike from the Mainland. At the same time, Washington sources claimed that an American observation satellite had detected a newly completed Chinese base for advanced ground-to-air missiles on part of the coastline facing Taiwan. The base was said to be the second one for the CSS-7 short-range missile, or the Russian-made S-300 PMU2 missile, which the PRC is supposed to have had since the mid-1990s. As reported in Taipei, the PRC had deployed 200 ballistic missiles in the coastal region facing the island and was expected to increase the number to 650 in the next five years; The base would eventually also be used to launch longer-range FT-2000 missiles of Chinese manufacture. Taipei reacted to the news of the new Mainland base by warning the PRC of "grave" consequences if it should use military means to settle the 'cross-strait issue' but Beijing said the story was fabricated to create a pretext for arms sales to Taipei. On the other hand, there was a report in *Jane's Defence Week* that Taiwan had also made advances in the development of a short-range surface-to-surface ballistic missile. The missile, called Tien Chi, was said to be capable of striking targets on the Mainland. Up to 50 of these missiles were supposed to have been deployed, some of them in well-defended silos on Tuny Island.

There have been frequent quotes recently in US media of experts' views that American interest in avoiding conflict between the PRC and Taiwan has grown with the establishment of American businesses on the Mainland. A prominent American senator has proposed that the US, while giving continued support for the Taiwan Relations Act and avoiding making any attempt to change the framework unilaterally, should support Taiwan's membership where statehood is not a requirement for membership and "work creatively for Taiwan's involvement when statehood is a requirement".

With respect to political relations between the Mainland and Taiwan, there have been reports that Beijing might be adopting a more flexible version of its 'One China' policy, although in February a Taiwanese official characterised in the press as a "top policy-maker" said that in some vital areas cross-strait relations were "retrogressing", with Beijing toning down its rhetoric but adding to the military forces facing the island, notably the short-range missiles deployed along the Mainland coast. Nevertheless, in early January, for the first time in 51 years, ships sailed direct from Taiwan to the Mainland, loaded with officials, tourists, and reporters. This followed a decision to open direct trade, shipping and postal links between several off-shore Taiwanese islands and PRC ports. The Mainland is said to wish to see such contacts intensified and considered as an internal matter. A plea to the PRC for reconciliation and peace, by Taiwan's President Chen Shui-bian on the occasion of the lunar New Year, was answered by PRC premier Zhu Rongji with the statement that Beijing would seek to implement its "one country, two systems" policy and opposed all "separatist plots" aimed at gaining independence for Taiwan. China's Premier has spoken of the "peaceful unification" of the two sides and has warned that the Chinese people would not tolerate any foreign power obstructing or undermining that process. In March, Beijing once again said it would not reopen talks with Taiwan until it affirms the 'One-China' principle. Also in March, George W. Bush was quoted in the Chinese press as saying, on the occasion of a visit to Washington by Japan's Prime Minister Mori, that the US government continued to adhere to its 'One-China' policy.

The US is reported to have paid a total of \$28 million for property losses caused by its bombing of the Chinese Embassy in Belgrade, during the Kosovo conflict. Beijing has reiterated that the bombing grossly violated international law and it has demanded once again that the perpetrators should be severely punished and a satisfactory account of the incident be given to the Chinese people.

Recently declassified US government documents reveal that in the early 1960s, Washington considered countering China's rapid nuclear-weapon development with a range of options from covert para-military operations to bombing the facilities and killing the experts. Whereas, apparently the US State Department preferred restraint, the military called for stronger measures once it became clear that the Central Intelligence Agency (CIA) had failed to recognise China's nuclear progress but did detect its preparations to test a device. Among options said to have been examined by the military was a nuclear attack. Then-President Lyndon Johnson appears to have rejected the use of unilateral unprovoked action, however, as unlikely to be effective and prone to provoke China into aggressive action. Reportedly, a document prepared by the Joint Chiefs of Staff ended up by recommending cooperation with the USSR and the UK to contain the Chinese threat through diplomacy and offer China economic assistance as a disincentive. It appears that consideration was also given to helping India develop nuclear weapons as a means of containing China. This was also rejected by President Johnson, who was committed to nuclear non-proliferation.

In March, the Washington White House announced that George W. Bush had accepted an invitation from the

Chinese government to visit Beijing. The visit was expected to take place in October. The US press listed a large number of serious problems that were likely to be discussed, and widely predicted that the meetings would not do much to bring the two countries closer together, but Bush said that the new Administration and he himself attached great importance to US-Sino relations, and he would work hard to promote ties between the two nations. Senior Chinese officials expressed high hopes of the meeting.

(**China Daily**, 3/1, 7/1, 8/1, 12/1, 2/3, 14/3, 16/3, 19/3; **IHT**, 5/1; **Knight-Ridder News Agency**, 5/1; **WP**, 5/1, 1/3, 24/3; **NYT**, 8/1, 13/1, 21/1, 6/3, 9/3, 16/3, 17/3, 19/3; **WT**, 9/1, 5/2, 12/3, 14/3, 15/3, 28/3, 1/4; **AFP**, 11/1, 14/1, 21/1, 23/1, 2/2, 12/3, 13/3, 15/3, 16/3, 22/3, 27/3; **R**, 11/1, 15/3, 24/3; **National Security Archive**, 12/1; **Singapore Straits Times**, 16/1; **People's Liberation Army Daily**, 21/1, 2/3; **Xinhua News Agency**, 23/1; **AP**, 9/2, 15/3, 20/3, 24/3; **US Department of State Office of International Information Programs**, 28/2, 20/3; **WSJ**, 28/2, 7/3, 14/3, 21/3; **LT**, 2/3, 3/4; **People's Daily**, 15/3, 21/3; **SCMP**, 20/3; **CSM**, 22/3; **USA Today**, 22/3; **Izv**, 27/3; **Jane's Defence Weekly**, 28/3; **BBC**, 2/4, 3/4)

- **France** has ordered a new generation of medium-range nuclear-tipped missiles to be launched from aircraft. (**Aerospatiale Matra Announcement**, 8/1)
- A report in the weekly *Der Spiegel* of 5 February claims that the German air force may give up its current ability to deliver nuclear bombs. Reportedly, the type of aircraft to be deployed in future would not have a nuclear capability, which, the paper suggests, may increase the likelihood that **United States** nuclear bombs may finally be withdrawn from Europe. The Netherlands government, on the other hand, has confirmed that two squadrons of its F-16 fighter-bombers have a nuclear-strike mission and that there are good grounds for a permanent but strongly reduced presence of tactical nuclear weapons in Europe. (**Spiegel**, 5/2; **Letter** from Netherlands Foreign Minister to Parliament, January; direct information)
- American intelligence sources have been quoted in the US press as saying that in 1999, the **Russian Federation** had moved short-range nuclear weapons to the headquarters of its Baltic Navy at its base in Kaliningrad. There was speculation in Washington that this could be a response to plans for NATO's eastward expansion, notably the accession of the Czech Republic, Hungary and Poland. Officials in the Clinton Administration did not initially react to the disclosure, but said it was a matter that needed bilateral discussion and had already been taken up "within NATO councils". Then-US Secretary of State Albright was reported to have discussed the matter with her Russian counterpart, Ivanov, in early January.

According to one report, the missiles in question were a new type of short-range missile with a range of 44 miles (70 km); another report said they were Tochka SS-21 tactical missiles, which have a range of 80 miles (128 km). Supposedly, Russia has a large supply of these weapons.

In 1999, the Soviet government had announced that all tactical nuclear weapons had been removed from Eastern Europe but there was no clear information, at the time, whether this announcement also covered the Baltic. Deploying new nuclear missiles would be against

Russia's stated policy of keeping the Baltic area nuclear-free but, as US officials pointed out, it would not violate any formal agreement. The President of Poland reacted to the news with a statement on Warsaw radio that he counted on Moscow's cooperation in having international inspectors examine whether Russia had deployed nuclear weapons at the base at Kaliningrad. Officials in the Baltic countries expressed alarm at the reports, but some observers were not convinced of their reliability.

Russia has categorically denied the reports. President Putin, in a conversation with German Chancellor Schröder, described them as "rubbish" as did the Russian commander of the Baltic Navy. The latter confirmed that the Baltic region would remain a nuclear-free zone. The issue was discussed in NATO, and on 24 January NATO inspectors from Denmark and Poland who visited the Russian enclave stated that "there [were] no nuclear weapons on the territory of the Kaliningrad region".

In January, an ICBM was test-launched in the Barents Sea by a submarine of the Russian Northern Fleet. It was said to have successfully hit its target in Kamchatka. In February, another ICBM was launched from a submarine in the Barents Sea, and yet another one from the Plesetsk testing ground. Both were said to have struck the target area on the Kamchatka Peninsula. The ostensible purpose of these launches was to prove the reliability and accuracy of Russia's deterrent forces, but political analysts have suggested that they may also have been intended as a warning to the US that Moscow opposes the deployment of an NMD system.

Also in January, the Russian Military News Agency reported that the third regiment of RS-12M2 Topol-M silo-based strategic missiles had become operational. Thus, by the end of 2000 Russia had deployed three Topol-M regiments. Observers commented that the most recent deployment of "only" six Topol-M missiles might suggest a shift in priorities from a strategic deterrent force to tactical, nuclear and conventional forces.

(WT, 3/1, 11/1; LT, 4/1, 5/1; NYT, 4/1, 7/1, 17/2; Hindu, 5/1; IHT, 5/1; WP, 5/1; AP, 6/2, 7/1; R, 12/1; AFP, 22/2)

- From the moment the new Republican Administration took office in the **United States**, in January, it proclaimed its determination to implement a strong ballistic missile defence system. Unequivocal statements in favour of missile defence had been heard during the election campaign, from candidate George W. Bush and other senior Republican politicians. After his swearing-in, on 20 January, Bush reaffirmed that he did not intend to back away from his commitment to build a missile defence system, even if this became a matter of contention with Russia. Several of the dignitaries chosen to serve in his cabinet took the stand to underline this resolve, claiming that, from a possibility, missile defence had become a reality, and leaving room for speculation only about the scope and nature of the system they would seek to adopt and the speed with which they would hope to deploy it.

During confirmation hearings in January, the nominee for Secretary of State, General Colin C. Powell said that the Administration would move "as rapidly as possible" to develop a National Missile Defense (NMD). With respect to the Anti Ballistic Missile (ABM) Treaty of 1972, which he characterised as "no longer relevant", he said that, in order to permit the deployment of a missile defence

system, this would have to be "modified or eliminated or changed in some rather fundamental way" and added that it might "be necessary ultimately to walk out of the ABM Treaty and abrogate our responsibilities", but adding that "I don't think we are there yet. We've got a long way to go and we have a lot of conversations to have with the Russians over this". He further said that actually deploying an NMD system would depend on US development of reliable technology and, once that was achieved, establishing [if] there was a real threat that needed to be countered. He expressed confidence that "it [would] be George W. Bush, [who] will make a judgment at that time as to the nature of the threat" and if that threat was real he was confident deployment would take place.

In his confirmation hearings, Defense Secretary-designate Donald H. Rumsfeld made a strong case for the deployment of a missile defence system "when it's technologically possible and effective". In subsequent interviews, Rumsfeld stated that missile defence "need not be perfect" and said that the US might well deploy such a system before all the technical problems were worked out. The system, he said, would also be a powerful diplomatic tool in persuading potential enemies not to develop ballistic missiles that could carry weapons of mass destruction. Rumsfeld called constructing an anti-ballistic missile defence system a "top priority" (he and other senior Administration officials now prefer to use the term "moral imperative") and referred to the ABM Treaty as "ancient history". At a press conference held shortly after his confirmation, Mr. Rumsfeld, who had long been known for his advocacy of a tough stance against the USSR and its successor, the Russian Federation, and against China, repeated that the US would go ahead with the NMD system also in the face of objections from Russia and other countries. George W. Bush underlined this approach when in March he said, in connection with missile defence, that his Administration planned to make clear to Russia's President Vladimir Putin, that it did not see Russia as an enemy although it may be a threat.

Observers recall that in 1998, Rumsfeld chaired the Commission to Assess the Ballistic Missile Threat to the United States which, using worst-case scenarios, concluded that one of several "rogue states" could deploy missiles capable of striking the United States within five years — a conclusion challenged by, among others, the Director of Central Intelligence. Since then, Rumsfeld also headed a commission set up by Congress to assess threats from space to US satellites. That commission's report endorses defence of American "space assets" and the deployment of means to engage enemy satellites, recommending that the US should develop "anti-satellite weapons, lasers and other space weapons", and that this "space control capability" should be an additional element of a "robust" NMD system.

At the Senate hearings and in subsequent statements to the press, Rumsfeld commented negatively on arms limitation treaties in general, and expressed the view that the "legacy of obsolete institutional structures and processes and organizations does not merely create unnecessary cost [but] ... it also imposes an unacceptable burden on national defense". Regarding the ABM Treaty he said, among other things, that this "ought not to inhibit a country, a president, an administration, a nation from fashioning offensive and defensive capabilities that will provide for our security". [However, reports about the

Munich 'Wehrkunde Konferenz' in February — see below — indicated that while there, Mr. Rumsfeld did not seem to exclude the possibility that some form of US missile defence might be compatible with a modified version of the ABM Treaty — Ed]. The new Defense Secretary initially called for a significant increase in defence spending and rejected further cuts in America's nuclear arsenal, saying that there was a risk that there would not be enough warheads to match the target list.

Throughout the ever-intensifying debate on US missile defence, commentators with close ties to the American defence establishment have expressed uncertainty about the pace at which the Defense Secretary would be able to pursue the deployment of an ambitious anti-ballistic and space defence system, given the calls by various branches of the military on available funds, and his own advocacy for greater efforts to combat "cyber terrorism" and the spread of biological and chemical weapons. In March, shortly before this issue of the *Newsbrief* was published, Secretary Rumsfeld was said to be engaged in a thorough review of the needs of all branches of America's armed forces, including missile defence, for which, it was reported, there were 17 competing proposals on the table. Competition for funds among the various services was said to be fierce. The US Air Force alone was said to have identified annual obligations amounting to almost \$30 billion for its intended mobilisation plan, beyond its present budget. The US Navy was reported to plan building, at a cost of \$750 million apiece, 32 electric-powered 'Zumwalt'-class 'stealth' destroyers to serve as platforms for cruise missiles and long-range cannon. Adding the resources needed to replace aging equipment, Pentagon officials estimated the shortfall in funds at over \$100 billion for the next fiscal year. There was a report that the Ballistic Missile Defense Organization (BMDO) wished to divert money from NMD and the Navy's Theater Wide Missile Defense (TMD) programmes to more immediate lower-tier missile defence programmes, including the Army's Patriot Advanced Capability programme and the Navy Area Defense programme, but there was said to be some doubt that George W. Bush and his Defense Secretary would go along with this diversion of funds. In early February, the former warned the armed forces not to make new ambitious spending plans, pending the completion of the Secretary's review of America's military priorities; later, however, he also repeatedly expressed his resolve to equip US armed forces with the most up-to-date weaponry. Many observers expected that, however keen the Administration might be on early deployment of NMD, a cautious fiscal policy in military matters — in which a salary increase for military personnel was seen as the main priority item — taken together with plans for incisive tax reductions, might help shape eventual decisions on the nature, size and timing of the NMD effort, and might well be decisive. There were said to be growing indications in Washington, that, in fact, the Bush Administration, prompted in part by concern about a flagging economy, was giving priority to tax reductions and would in the short term refrain from making large additional commitments on NMD development. In late February the Administration requested what was considered a relatively modest increase of the military budget of \$5.7 billion, of which \$2.6 billion would go to military research and development and most of the rest towards higher military pay and benefits, healthcare and housing. At the same time, government spokespersons

reiterated that the US would accelerate the development of effective missile defences and deploy them as quickly as they would prove themselves in tests. A White House comment on the budget proposal was that NMD was and remained America's most pressing national security challenge.

Regardless of possible financial restraints and the uncertainty which system would eventually be chosen for deployment, recent press reports spoke of growing political pressure on the Administration to start with the construction of the NMD infrastructure. Several Republican Senators had called for site preparations for an NMD radar installation on Shemya Island, off the coast of Alaska, to begin during the relatively mild months around the middle of the year, which would mean that a decision to award the appropriate contracts would have to be taken in the course of April. Reportedly, weather conditions at the site restrict construction work to a few months, and it is estimated that if work were to begin right away, the facility could be ready by 2006. NMD opponents expressed concern that Russia might take the start of construction at Shemya as an indication that the US intended to withdraw from the ABM Treaty. Other observers, however, maintained that the work would only violate the Treaty if it were integrated with other elements of the NMD system. The influential conservative daily *Washington Times* said that with "missile defense true believers" in policy-level jobs in Washington, and both houses of Congress in Republican hands, the time had finally come to make Ronald Reagan's Strategic Defense Initiative a reality. The paper called on George W. Bush to "duplicate [Reagan's] bold stroke", give notice of withdrawal from the ABM Treaty, and order construction to begin in Alaska.

At the same time, several congressional supporters of a strong anti-missile shield, although keen to proceed as fast as possible with the construction of the Shemya radar installation, asked the Secretary of Defense not to move ahead with that project without also declaring in favour of other systems, as that might be exploited by NMD opponents, including Russia, to block other options. Senior naval personnel urged that in addition to the Shemya project, a start should be made with the early deployment of a sea-based radar system. The US Navy also continued to promote TMD system, possibly in cooperation with Japan. The Pentagon said that no decision had yet been made on the Alaskan site and recently officials were quoted as saying that a one-year delay would not be of great import. Secretary Rumsfeld was not expected to approve the start of site preparations at Shemya, before he had completed his review. The head of the US Army's Space and Missile Defense Command stated that only the land-based NMD system would be "mature" enough for near-term deployment, although that, too, was facing challenges.

January's confirmation hearings provided an opportunity for opponents of a strong anti-ballistic missile system to air their objections, both within the Congress and in a range of publications. Reports on the importance the American public attach to the development of an NMD system vary, depending on the source of the survey. An inquiry conducted in early January found that the majority of the American public saw it as a low priority, and a survey later that month indicated that just over one-third of people polled considered it as a national-security priority. A survey made in mid-February would seem to

show that more Americans were in favour of missile defence than opposed it (44 per cent to 20 per cent, with 36 per cent undecided). More sophisticated inquiries since have yielded more subtle responses. While a poll in late February would indicate that 80 per cent of people asked said they were in favour of missile defence as such, support was said to drop to 50 percent in light of experts' doubts that the system could protect all of the US; to 45 per cent when the high costs were revealed; and to a similar percentage when the argument was brought up that NMD might lead to a new arms race. When the argument was introduced that NMD might lead to the abrogation of existing arms control treaties, support was said to drop to 37 per cent. Reportedly, while a majority of Americans approve of missile defence in principle, among other programmes of the current government, the argument that China and Russia continue to harbour objections and would probably be able to neutralise any defence system with relative ease by upgrading their offensive arsenals is said to carry weight. There is also doubt both about the need for NMD and its efficacy, given the chance that a small state wishing to use a weapon of mass destruction against the US might be expected to choose other means of delivery than a long-range missile.

In the Foreign Relations Committee of the US Senate, Joseph Biden, the senior Democrat, has called on Bush to proceed cautiously in implementing his pledge to deploy a "robust" NMD system, advising him to consider the technological challenges, potential consequences for arms control, the impact on strategic stability and the possible effect on US relations with allies. Biden, has urged that any review should take careful account of Russia's likely reactions and said that "the world may not be ready yet for the missile system that President Bush would like to build". Expert critics have pointed out that the Bush Administration is trying to give NMD an aura of inevitability, which they say is not justified since, among other things, it still remains to be seen if any anti-missile system is workable at all and it will take a great deal of time for it to be proven so. Citing the Pentagon's view that the target date of 2006 or 2007 which the Clinton Administration had in mind for a limited, land based NMD system was overly optimistic, some point to the many additional logistical and technological constraints that will have to be overcome before it is possible to deploy a system capable of protecting overseas allies and US troops. Such a system would, experts say, require ship-based interceptor systems, airplane or space-based laser systems and a boost-phase system, all of which are many years from deployment.

Opponents also draw attention to current disagreements among supporters of ballistic defence, as to which system should have preference. Reportedly, there are deep differences on that point among Republican adherents of NMD. Many are known to give preference to the ground-based system pursued by the previous Administration, because, since much work has already been done on it, that system would seem to lend itself to earlier deployment than would any of the others. Other supporters, including, supposedly, Rumsfeld's chief of staff, are known to see the limited, ground-based approach as inadequate and promote sea and space-based systems. Among this faction, there seems to be considerable support for the idea of upgrading the Navy's sea based 'Aegis' system, which is now designed as a

defence against cruise missiles, but might be provided with faster rockets and stronger radar to become a boost-phase defence against long-range missiles. While this would have the advantage of mobility, Pentagon officials have pointed out that the development of the necessary advanced rocket and radar technology would make it unlikely that such a system could be deployed before 2012. There are also proposals for a "layered system", building onto the ground-based approach and subsequently adding sea and space-based elements. Debates on these options seem to have been held within the Bush national security team, but reportedly, all permutations were being reviewed by the Defense Secretary himself who, it is relevant to note, has said that the technologies involved would have to evolve in a way that permits reasonable confidence that they will work. Given the limitation in available funds, at least in the early stages, commentators did not expect that the Administration would wish to finance multiple approaches in preparation for a subsequent choice.

As to the possible involvement in an NMD scheme of other countries, comments in the US national press contend that "in the end" America's allies have little choice but to join in the NMD system, or stay out and "live with it". This approach was reflected in the statement of the newly confirmed Secretary of State, Colin Powell, who rejected opposition to NMD as "nervousness" about change, and said that "sometimes, leaders have to go through these barriers". Kenneth Adelman, the Director of the Arms Control and Disarmament Agency in the Reagan White House, ventured the view that Americans tend to accept new solutions, while Europeans cling to the old and the familiar. General Powell also demonstrated his receptiveness to the views of other governments in the statement he made to his staff on the day he assumed his duties, that "[o]ther systems do not work. We are going to show a vision to the world of the value system of America".

So far, however — and although, reportedly, senior US officials told a high-level NATO delegation that "[t]he train is leaving the station. Either you get on it or stay behind, shouting from the platform" — most of America's NATO allies are still reported to have serious doubts about the wisdom and feasibility of deploying an NMD system. France's President Chirac is on record with the statement that it would trigger a renewed arms race. Senior South Korean officials have been quoted as saying that they fear it will hamper inter-Korean détente and raise military tensions. Germany's Defence Minister has said that the system is not "very realistic", and the technical feasibility and financing are "not at all manageable yet" and his Foreign Minister has stressed repeatedly that missile defence must not come at the expense of arms control. US media claim that the British government is divided on the possibility of making the Fylingdales radar facility available to the US. Prime Minister Blair is said to face the problem that a pro-US decision in this matter would antagonise prominent members of his party, some of whom have publicly expressed their opposition to NMD, while a refusal would disturb UK-US relations. It has been reported that during his visit to Washington, in late February, Mr. Blair warned George W. Bush against creating a dangerous rift between the US, Europe and Russia by persisting with his current NMD plans. Reportedly, at the February meeting, Blair was not faced with the need to take a decision in the matter, which is

said to have accorded with his hope that he would not have to do so before the British General Election, which at the time was expected to be in May. According to British press reports, if the Prime Minister were asked to allow an upgrade of the Fylingdales early-warning radar to take place, he would find it difficult to refuse and US media take it as a foregone conclusion that at least one British radar site would be made available to serve as part of an American missile shield.

As to full British participation in NMD, the UK Chief of Defence Staff has warned that this would be extremely expensive. The Foreign Secretary, Robin Cook, said during a visit to Washington in early February, that an anti-missile shield should be installed in such a way that it does not increase tension with Russia. He stressed the need to respect the ABM Treaty but was quoted also as saying that the issue was not high on the agenda and Britain need not make up its mind for the next several months. William Hague, leader of the opposition Conservative party in the UK, has said that he would back the American plans and his defence spokesman was reported to have told officials in Washington of his party's unconditional support for NMD and its resolve to participate, should the Conservatives win this year's General Election.

Canada's Prime Minister Jean Chrétien, was initially understood to be particularly concerned that an NMD system could undermine arms-control treaties and spark nuclear proliferation, but after a visit to Washington in early February he was quoted as saying that "[p]erhaps we are in a different era". He also said, however, that "we did not go into the details of saying that this treaty is irrelevant". Comments in Ottawa indicated that, given Ottawa's defence arrangements with the US, which might be affected by a refusal to accept NMD, the Canadian government seemed to be repositioning itself with regard to NMD. For the present, its leaders stated that they would remain "open-minded" until they knew what system the US would deploy, and what cooperation would be expected from Canada. Washington was said to have indicated that it did not expect Canada to take a position soon, but officials in Ottawa said that they expected the US Administration eventually to insist that Canada play a limited role in NMD, under conditions they hoped would be politically acceptable. US media noted the remark by Canada's Defence Minister, that before deciding about NMD the Cabinet would have to consider public opinion, and the suggestion from the Foreign Ministry, that joining NMD would spoil, as one official was quoted to have said "all the work we have done over the last decades on nonproliferation".

The 37th international Conference on Security Policy, the so-called *Wehrkunde Konferenz*, held in Munich in early February, provided an early opportunity for a multilateral exchange of views between senior officials of the new US Administration on the one hand, and representatives of an array of European nations on the other. According to American press reports, US Secretary of Defense Donald Rumsfeld, who attended with a large retinue, sought to use the event to help defuse international opposition to America's missile-defence plans. Reports vary on the extent to which he succeeded. In what a senior US official described as an exchange of "polite complaints", European leaders expressed deep concern at the American plans. In his keynote speech, German Chancellor Gerhard Schröder, warned against "overly

hasty and early determinations" about deploying missile defences. The foreign policy spokesman of the German opposition party, the Christian Democratic Union, was quoted as saying that NMD was the sort of project dreamed up by people who want to be "invulnerable" so as to be "masters of the world". Germany's Foreign Minister, who stated that he was not speaking just for his country but represented by and large the European perceptions of the issue, expressed understanding for US concerns, especially in Asia, yet warned several times against ill-considered steps that might spur a new arms race. Shortly after the Munich event, the Swedish government, which during the period covered by this issue of the *Newsbrief* was presiding over the EU, urged the US to abandon plans for a national missile shield, considering its likely consequences for disarmament and non-proliferation. Japan was said to be ambivalent on missile defence. For some time it has been engaged with the US Navy in a joint study on TMD, which it is said to consider as potential protection against attacks from states in its area. It appears to have a problem, however, since it may not be able to actively participate in such a scheme without infringing the anti-militarist clauses of its constitution. The issue is thought to preoccupy the Tokyo authorities as a potentially divisive issue with serious political consequences. In mid February, it was reported that the joint study had been extended until 2006 or later, as a result of delays in US tests of a ship-based defence system. Japanese defence sources are said to expect that it will take at least three years for the US to complete the nine missile tests it is planning to stage. The prolongation of the study is said to increase Japanese doubts about the feasibility of establishing a ship-based missile shield. The East Asian Strategic Review 2001, prepared, by the National Institute for Defence Studies of the Japanese Defence Agency, contains a call for consultations with the PRC over the proposed deployment of NMD and the warning that this may prompt Beijing to increase its missile capacity. The Review is reported also to include a warning that even limited NMD deployment would have a major impact in this regard and that the US and Russia should first reach agreement concerning the ABM Treaty.

At the Munich conference, Defense Secretary Rumsfeld, who rejected the assertions about a new arms race as "outdated rhetoric", assured European government representatives that the US would consult them on its antimissile plans, and expressed his country's willingness to assist friends and allies threatened by a limited ballistic missile attack to deploy defences against such attacks. As reported, he did not address the question how such a system could be reconciled with arms control nor how it could be made palatable to Moscow and China. According to senior US defence officials, Rumsfeld's statement left little room for compromise. Among his extensive retinue was Democratic Senator (former Vice-Presidential candidate) Joseph Lieberman — known as a supporter of a 'boost-phase' system — who was quoted as saying that "[t]he question from an American point of view is not whether we will have a national missile defense system but when and how", but he added that "[t]his is not a technologically feasible program now. We are some years away".

The Security Adviser of the Russian Federation, Sergei Ivanov [who has since become Defence Minister — Ed], also addressed the Munich *Wehrkunde Konferenz*. His statement followed by several days a presentation from

Russia's Foreign Minister, Igor Ivanov, to the Conference on Disarmament. Both speakers warned of the serious consequences for world stability if the US were to deploy an NMD system, in contravention of the ABM Treaty, and warned of the repercussions this would have for existing disarmament agreements. Both also held out the possibility of substantial reductions in strategic nuclear armaments if that Treaty were preserved, and underlined Russia's willingness to cooperate on a Europe-wide missile defence system that should be able to intercept missiles during their boost phase. Media observers took it as a signal of the new Administration's attitude to Russia that the US Defense Secretary left Munich without waiting to hear Ivanov speak. Several days after the Munich meeting, Russia's then-Defence Minister, Igor Sergeyev, announced that Russia was making contingency plans to respond to the American anti-missile defence plans, not by starting a new missile build-up but through the use of "asymmetrical technologies" that could penetrate any missile shield. Sergeyev said that in the Reagan era, his country had three programmes to counteract asymmetrically the American 'Star Wars' threat; he claimed that these programmes could be reinstated at any time. Also, in what the Director of US Central Intelligence, George Tenet, said was a direct challenge to the US, and the press saw as a response to America's NMD plans, President Putin announced that he would have talks with Iran's President Khatami on trade and military cooperation, and would receive the North Korean leader Kim Jong-il. Press comments note that the two states are among those against which the American anti-missile effort is supposed to be implemented. The Russian missile tests that were held around the same time were also seen in Washington as a reaction to US moves towards NMD.

The growing friction between Moscow and Washington was reflected in increasingly harsh rhetoric. US Defense Secretary Rumsfeld, commenting on Russian objections to NMD said these were "not really serious", and twice publicly contended that Russia, as "an active proliferator of missile technologies" had helped Iran, the DPRK and India obtain weapons with which those states were threatening the US. These remarks, echoed and reinforced by Deputy Secretary Wolfowitz, led to angry reactions from Moscow, where the Foreign Ministry dismissed them as "Cold-War logic" and a fragile pretext for the creation of NMD. Meanwhile, Western media have reported that Russia was itself beginning to take the possibility of missile defence more seriously. On 20 February, in a meeting with NATO Secretary-General Robertson, Russia's President Putin presented a proposal for a non-strategic missile defence system intended to protect Europe — which Moscow sees as more vulnerable than the US — from missile attack. The nine-page confidential paper entitled "Phases of European Missile Defence" — described by US experts as sketchy and "thin in content" — was said to contain a description of a three-stage approach. In the first stage, experts would assess if there is a threat of attack with non-strategic missiles on European states. If these experts conclude that such threats exist or may emerge, a conceptual model would be developed of means to counter or neutralise the threat. The third phase would see the creation of elements of an actual missile defence system, should the need arise. That system is described as intended to protect "separate missile-dangerous directions" (i.e., be targeted on missiles emanating from the specific state or states where

a missile attack is expected to originate) rather than the entire European continent or large parts thereof. It would be land-based and mobile, susceptible of rapid deployment and using interceptors capable of reaching a height of 90 miles; the missile type envisaged is thought to be that used in Russia's S-300 air-defence system. There would be a joint satellite warning system, which, as suggested by President Putin, could be created by expanding the Russian-American launch notification centre in Moscow. As stressed by the President and subsequently by his Foreign and Defence Ministers, the proposed system would not violate the ABM Treaty. Observers noted that the plan no longer mentioned the 'boost-phase' approach, which Russia had formerly seemed to favour, and ascribed this change to the technological complexities of that approach as well as to the fact that it would run counter to the ABM Treaty.

Reportedly, NATO headquarters was giving serious consideration to the Russian proposals, although apparently, there, too, the information provided was seen as sparse. US media reports claimed that the US Administration was pleased with Moscow's apparent acknowledgement that some form of anti-ballistic missile defence was called for, and with its obvious willingness to discuss a joint approach. Washington observers seemed inclined to ascribe this changed attitude to the Kremlin's growing recognition that the Bush Administration was unalterably determined to adopt some form of missile defence, and that cooperation would be the only option. In parallel, there had been reports that hinted at a growing resignation by European governments to the realisation that eventual American deployment of an NMD system was a foregone conclusion. Some of these reports claimed to see signs that European opposition tended to weaken "appreciably" when the word "national" was omitted from discussions on ballistic-missile defence, and that allied nations would be likely to drop their objections altogether if a BMD system could be made to protect them as well. It was considered relevant, in this context, that US Defense Secretary Rumsfeld, speaking with NATO Secretary-General Robertson at a joint press conference on 8 March, said he had stopped differentiating between 'national' and 'theatre' missile defence.

Soon after the Munich meeting, American press reports began to note that senior European officials, including Russians, seemed to "grudgingly" accept the fact that the new US Administration was determined to move ahead with missile defence, there were clear indications of a shift in policy in a number of European countries. The German Chancellor stated in a television interview that his country would have a "vital economic interest" in helping develop NMD technology. He said he wanted to ensure that Germany was not excluded from the most important technological and scientific work in the defence field. He also said, however, that neither China nor Russia should be locked out of the project. American commentators had predicted that Mr. Schröder's visit to Washington, on 29 March, would see the completion of a shift toward full acceptance of NMD by the German government and therefore, inevitably, by other Western European governments. As it turned out, however, questions he posed at a White House press conference ("The threat scenario that is behind the whole system; is it technologically feasible? Can we truly implement it? Who is going to be covered under the shelter...?") were seen as indications of persisting doubt. France, while

apparently maintaining many of its objections to NMD – its Foreign Minister, Hubert Vedrine, before visiting Washington in March, also said that one did not know how NMD worked technically, nor what sort of menace it had to respond to — was reported to have signaled to Washington its willingness to consult about NMD, and to have told Moscow that it could not be influenced by Russia's arguments about the US programmes. This was taken in the US as meaning that European states felt they could no longer dismiss missile defence merely on the strength of Russia's objections. Along similar lines, Javier Solana, in charge of security issues for the EU, was quoted as having said that the US had the right to deploy an NMD system if it concluded that this served its national security. He was also supposed to have said that the ABM Treaty "is not the Bible". NATO Secretary-General Robertson pointed out that "there has to be acceptance ... that the decision on missile defence was made in the US election". In Germany and the UK (opposition) Conservative politicians came out in support of NMD, especially if this could be extended to Europe. Lord Robertson's remarks were widely seen to have pointed to a possible trade-off in which the US would concede the right of European nations to create a rapid-response force with its own command structure, outside NATO, in return for the acquiescence by the latter in missile defence.

This, reportedly, had also emerged from discussions between Tony Blair and George W. Bush in Washington. Press comments, meanwhile, indicated that for such a trade-off to take effect, many questions would have to be settled first, both in the US domestically, and with the states involved. These would include such issues as the geographic extent of the missile-defence system and the areas it would be designed to protect, the states against whose missiles it would be designed – and thus its nature and scope, the technology to be used and the costs involved, well as the contributions to be made by participating states. The issue of an inter-European independent military force appeared, in its turn, to have raised the bile of Republican members of the US Congress, who said they mistrusted the intentions of some EU governments. European observers noted, that in Munich Secretary Rumsfeld did not once use term 'European Union' and many said they saw this as a negative omen and doubted if in the long term the US Administration would be willing to give its concurrence with an independent European force as a trade-off for missile defence with which, as these politicians tended to reason, Europe would have to put up in any case. At the same time, a prominent Republican member of the House of Representatives, Curt Weldon, launched the idea of involving NATO in missile defence and, as part of NATO expansion, explore the possibility of equipping Eastern European countries with a wide-range radar system, forming, in his words, an electronic "Great Wall" to shield allied nations from ballistic missiles. The proposal seems already to have been submitted to European embassies for consideration.

Shortly before President Kim Dae-jung of the Republic of Korea (RoK) was to make his first call on the new US Administration, great agitation was reported from within official Washington circles at what was seen as a sudden change of heart in Seoul about America's NMD plans. At that time, at the conclusion of a visit by Russia's President Putin to South Korea, the two Presidents adopted a joint communiqué in which they stated that the ABM Treaty

was a "cornerstone of strategic stability" and should be preserved and strengthened. This was read by many in Washington as meaning that South Korea was taking Russia's side in the dispute with the US over ballistic-missile defence. Republican politicians scathingly rebuked the South Korean President, and conservative newspapers, expressing indignation at this "reprehensible" utterance on the part of "America's staunchest ally", scoffed at what the *New York Times* described as "Seoul's act of independence." In the face of these reactions and reportedly pressed by US officials, the RoK's Foreign Ministry hastened to explain that it was one thing to agree with Russia that the ABM Treaty was a "cornerstone of strategic stability", but quite another to conclude that Mr. Kim saw NMD as necessarily violating that Treaty. Foreign Minister Lee Joung-binn said that the demise of the Cold War, ten years ago, demanded "a different approach" to global security and it was for the US to say how the new threats should be dealt with. Subsequent reports from Seoul claimed that South Korea had consulted in advance on the contents of the communiqué with the US, and had been told the latter had no objection. The US State Department weighed in with the comment that the communiqué should not be seen as anti-NMD. Ostensibly, in Washington, this was taken as the end of a possible misunderstanding, but there appeared to be anger among Korean politicians at the way they saw their officials being guided by Washington's directives. There were also indications that, in the face of Washington's hardening attitude towards the DPRK, which he feared might undo the progress recently achieved in relations with that country, Kim Dae-jung might well have meant to side with his Russian colleague over NMD so as to get Mr. Putin to mediate with the DPRK, and there was said to be resentment in Seoul that the US had frustrated this move. RoK reports on the Bush/Kim discussions claimed that the latter had taken a "cautious stance" on the NMD issue and had listened to what the US had to say, without expressing support or opposition. South Korea's Foreign Minister Lee later stated that during the summit meeting, the US had, in fact, asked for RoK support for NMD, but "[w]e disagreed and the White House later announced it had not made any request ...". His Ministry clarified that Mr. Lee had not intended to convey opposition to NMD but that in the RoK's view it had been inappropriate to discuss the issue at the time. The confusion was compounded a few days later when Mr. Lee denied having received such a request from the US. He has since resigned as part of a wider cabinet reshuffle.

American media have reported as perhaps the most important shift in the views of other states with respect to US plans for NMD, the statement by Sha Zhukang, head of the Disarmament Department in China's Foreign Ministry, that his country, while remaining opposed to Theater Missile Defense, especially for its potential role in defending Taiwan, and opposing NMD as "unilateral nuclear expansion", wishes to narrow its differences with the US Administration over its plans. "Noting and welcoming" the US statement that NMD is not targeted at China, he was quoted as saying that China was "ready to have dialogue and discussions with the Americans". He also said China recognised the issue had moved to a new stage and was open-minded and had a series of proposals on the table.

As to the establishment of a system to defend satellites in space, apart from the opposition that might be expected from China and the Russian Federation, it is thought unlikely that this would find much favour with America's allies. In any case, experts are said to doubt both the feasibility and the wisdom of creating such a system, pointing out that it is far easier to destroy such relatively stationary objects as satellites than to defend them.

Meanwhile, development efforts are continuing although reportedly considerable delays are once again being encountered. A report presented by the Congress' General Accounting Office (GAO) in early March, claims that the Space-Based Infrared System Low, the satellite observation system needed for the kind of ambitious anti-missile system sought by the Bush Administration — of which deployment is planned to begin in 2006 and be completed in 2010, at a cost of \$11.8 billion, is far behind schedule and well over cost, and may not perform as intended. Given the delay, the US Air Force is said to have given orders to begin production, although development has not been completed. Supposedly, this will mean that testing results will not be available until five years after the start of production. According to the GAO report, the software — which the Pentagon requires should be ready a year before the system is deployed — will not be completed until three years after the first satellites are in orbit. It also points out that five of the six key technologies are so far from maturity that they may not be ready when needed.

There have been several reports also of delays in the development of other elements of the system. An interceptor test foreseen for early 2001 is said to have been postponed until June. The television programme *Sixty Minutes* has claimed that for years contractors have been in the habit of covering up system failures. Against claims by the BMDO, that the kill vehicles are capable of discriminating between decoys and warheads, a recent report of DoD's testing office has once again criticised the lack of realism in the testing of intercept vehicles, which it says lack the means to discriminate between enemy warheads and decoys, and are easily frustrated by jamming chaff. Some experts, indeed, maintain that current development work may well be pointless, because in practice the technology will not be effective. In this connection it is noted that the Boeing Corporation — one of the six big defence contractors listed in the US press as being in line for major contracts; the other five being Raytheon Co., which is already involved in several defence systems, Lockheed Martin Corp., General Dynamics Inc., Litton Industries Inc., and TRW Inc. — at the end of last year was awarded a new \$5.2 billion contract for the development of a missile intercept programme, although its booster rocket which is intended to propel the Raytheon intercept vehicle, and which was to have been tested in November 2000, then in April 2001, and now, it is hoped, in August of this year, is far behind schedule. This means, reportedly, that the entire testing programme for the intercept vehicle will have to be reviewed, as its behaviour is expected to be greatly influenced by the greater stress of the stronger booster.

One element of the missile intercept programme is the 'Lead Systems Integrator Distributed Simulation (LIDS)', a high-fidelity, system-level digital simulation of the NMD system designed to use data obtained from NMD flight tests and integrated ground tests to "validate" system performance. Philip Coyle, until recently director

of operational test and evaluation in the Pentagon, has claimed that this programme had been "seriously delayed" and "model fidelity [was] significantly lower than what had been planned". Mr. Coyle expressed concern that if it took too much time to validate the programme, actual flight test data might be used to support "early acquisition decisions". As reported, it was not certain whether and to what extent an updated LIDS version, expected by September, would be able to function effectively for the next NMD "milestone review", which apparently will concentrate on the radar functions of the system. More recently, it was disclosed that the new Boeing contract, which is now said to cost \$13.7 billion through fiscal 2007, will include 20 more NMD flight tests instead of the 16 planned before, as well as a "counter-measures mitigation program" and an "expanded test programme infrastructure". These two new elements, each of which is to cost \$720 million, are said to be added in response to experts' criticism and calls for more rigorous and realistic testing.

On the occasion of his departure, Philip Coyle warned that missile defence was "the most difficult thing the Department of Defense [had] ever tried to do", adding that he believed that the current programme had merit but had barely begun to chip away at the technical challenges. Claiming that in the most recent test the interceptor "never got close" to the mock warhead, he criticised officials for belittling the causes of these failures. Coyle repeatedly stressed the need for realism and cautioned that flight tests so far had been seriously lacking in that respect. He pointed out that the system would have to be made to work under disadvantageous combat conditions, challenged by enemy "feints and surprises", and warned that countermeasures could include not only decoys but nuclear explosions in space whose radiation could destroy the system.

A new report by the GAO claims that the programme of DoE for the maintenance, refurbishing and extension of the shelf life of American nuclear warheads is two years behind schedule and \$300 million over budget. The report claims that the problems threaten the planned expansion of the programme, affecting much of the stockpile. It blames the Defense Programs office of DoE, which it says has a "dysfunctional organization with unclear lines of authority that lead to a lack of accountability".

In January, then-Secretary of Defense William Cohen said that the Raytheon Company's Patriot missile failed to work in the Persian Gulf War. Contrary to reports from both the Army and the manufacturer that in the 1991 War, 90 per cent of the missiles launched by Iraq had been destroyed — an assessment later adjusted to a 70 per cent success rate claimed by the Army against the Scuds launched at Saudi Arabia and 40 per cent against those fired at Israel — a study by the US GAO has since concluded that the Patriot's success rate was probably no better than nine per cent. The Congressional Research Service has said that it had proof of only one destroyed Scud warhead (a conclusion apparently also reached by Israeli analysts) and the prominent MIT physicist Theodore Postol, a well-known critic of the Patriot, has claimed that "there [was] no evidence of any destruction of any Scud warheads". Secretary Cohen nevertheless defended the need for continued investment in anti-missile technology and stated that since the Persian Gulf War, the Patriot had "dramatically improved".

There has been news about private discussions going on between a group of American researchers and Chinese experts, to consider ways in which an American NMD system might be made acceptable to Beijing. Although conducted on a non-governmental level, the exchanges appear to be attended by Chinese officials, supposedly reflecting the interest of China's authorities in an arrangement that takes account of their concerns. As reported, the ideas discussed would require the US to place clear limits on the size of the NMD system and acknowledge China's stature as a nuclear power – suggestions which are thought to run counter to the thinking of many Republicans. It would be understood that China would maintain a nuclear arsenal just large enough to outnumber the defensive system. The arrangement — which would take the form of a “strategic understanding” — would require China — against its habitual policy — to show substantial transparency about its current arsenal as well as about the number and kinds of offensive weapons it plans to develop.

(LAT, 23/12/00, 28/1, 4/2, 5/2, 7/2, 17/2, 33/3; CBS News On-Line, 26/12/00; Inside Missile Defense, 27/12/00; Chicago Tribune, 29/12/00; WP, 30/12/00, 4/2, 7/2, 12/3, 13/3, 17/2, 21/2, 25/2, 4/3, 6/3, 15/3; Defense Daily, 4/1, 7/3; Forth Worth Star-Telegram, 4/1; NG, 5/1, 16/2; CSM, 8/1; NYT, 9/1, 12/1, 13/1, 16/1, 27/1, 28/1, 1/2, 2/2, 4-6/2, 8/2, 9/2, 11/2, 14/2, 21/2, 22/2, 24-26/2, 28/2-2/3, 15/3, 21/3, 24-26/3, 30/3; Bloomberg.com, 10/1, 2/3; Atlanta Journal and Constitution, 11/1; Boston Globe, 11/1, 13/1; Pew Charitable Trusts Survey, 11/1; USA Today, 11/1, 18/1, 25/1, 5/2, 6/2, 12/2; DT, 12/1, 16/2, 23/2; Philadelphia Enquirer, 12/1, 5/2; R, 12/1, 17/1, 25/1, 30/1, 4/2, 14/2, 15/2, 18/2, 28/2, 14/3, 15/3, 20/3, 23/3; WSJ, 12/1, 30/1, 5/2, 9/2, 16/3; WT, 12/1, 6/2, 22/2, 26/3; AP, 14/1, 26/1, 4/2, 13/2, 14/2, 19/2, 20/2, 22/2, 2/3, 20/3, 26/3; US News and World Report, 15/1, 19/3; Fairbanks Daily News-Miner, 17/1; Newsweek Poll, 20/1; Business Week, 22/1; Defense Week, 22/1, 26/3; Berliner Zeitung, 25/1; Daily, 26/1, 2/2, 13/3, 28/3; KT, 29/1, 2/3; Newsweek, 29/1; IHT, 30/1, 5/2, 6/2, 8/2, 20/2, 22/2, 27/2, 10-11/3; ACT, January/February; Statement by Russian Foreign Minister at the Conference of Disarmament, 1/2; Globe and Mail [Toronto] 2/2, 8/2; LT, 2/2, 16/2, 1/3; Defense News, 5/2; G, 6/2, 12/2; Toronto Star, 8/2; Inside the Pentagon, 8/2; Office of the Press Secretary, White House, Washington, 13/2, 22/2; Gallup Poll, 14/2; Izv, 16/2, 16/3; People's Daily, 16/2; Xinhua, 16/2; Japan Times, 17/2, 2/3; ST, 18/2; SPACE.COM, 26/2; Budget Address to Congress, 27/2; Asian WSJ, 1/3; KH, 2/3, 4/3; US State Department, 2/3; AFP, 8/3; American Forces Press Service, 9/3; Arms Control Today, March)

h. Nuclear and Missile Proliferation

- It has been revealed in Washington that during the last weeks of its second term, the Clinton Administration came close to settling its disagreement with the Democratic People's Republic of Korea (DPRK) on the issue of the manufacture and export of missiles. In early January, then-US Secretary of State Madeleine Albright said there was “a clear chance” for the US to come to terms with the DPRK, whose leader, Kim Jong-il, was, she said, “interested in making some arrangement that would limit his development of missiles in exchange for US launching of civilian satellites”. In the same month, a

further round of talks on the missile issue between ambassador-level representatives of the DPRK and the US was held in New York, where, reportedly, the DPRK submitted a new proposal. Since then, it has been revealed in Washington that shortly before the new Administration took office (on 20 January), the Clinton Administration had almost concluded an agreement with Kim Jong-il that would have settled some of the most important problems between the two countries. According to authoritative disclosures, the DPRK's Leader had promised in confidential talks not to produce, test or deploy missiles with a range exceeding 300 miles (500 km) and to halt the sale of missiles, missile technology and training abroad, including systems it had already contracted for. Some important questions, it was said, were still open, including that of verification; whether missiles already produced were to be destroyed; and what the value should be of the non-monetary aid that would be paid in lieu of cash. Expert-level talks, it seems, had not been able to settle these matters fully and there had been hope that this might be done at a higher level, and that a visit by President Clinton to Pyongyang might have served to adopt an agreement on the general principles of a deal, leaving some outstanding matters for the succeeding Administration to settle. Before this could be done, however, the US elections were held, and, according to the report, when the Bush team indicated that they would not endorse a deal, Clinton's officials decided that the time remaining would be too short to settle the outstanding issues.

There was much speculation at the time, both in the US and abroad, about the policy the new American Administration would adopt towards the DPRK, and about the latter's likely reactions. In the early days of the latter's Administration, senior US officials expressed confidence that the new Administration would be positive to South Korea's “sunshine-policy” for détente with the North, although they said they were uncomfortable with the term and suggested that Seoul should rename its approach more aptly “engagement policy”. Soon after, there were signals from Washington that the Bush team was giving consideration to recommendations from a White House task force for a new policy towards Pyongyang that would be much less accommodating than the one followed by the previous Administration. At that juncture, intelligence and military quarters in Washington played up reports that the DPRK was strengthening its military forces. The recommendations by the White House task force for a new policy towards the DPRK were said to include the precepts that the US should pursue rapprochement with the DPRK only if it accepted a formal agreement limiting exports of long-range missiles, and provision of any further American economic assistance to Pyongyang would have to depend on greater transparency regarding the DPRK's production and export of missiles. The US would, as reported, generally support the RoK's reconciliation with the DPRK, but according to Washington sources, this process should evolve cautiously, and be staged over a long period of time.

Once the results of the US elections were known, the President of the Republic of Korea (RoK), Kim Dae-jung – reportedly uneasy about the new policy Washington might adopt towards the DPRK, and fearing that it would try to discourage the South from too close and too rapid a détente with its Northern neighbour – announced that he hoped to visit the US soon, to obtain the support of

George W. Bush for his “sunshine policy”. Accordingly, in early March Mr. Kim met with Mr. Bush for a much-publicised and reportedly intensive discussion of the various areas of common interest, characterised – in diplomatic parlance implying serious disagreement — as a “frank and honest exchange of views”. A joint statement, issued after the meeting, is reproduced below, under **IV. Documentation**.

The summit meeting gave rise to a spate of reports, some of them mutually contradictory, and to comments from government officials, observers and media commentators, within the US and abroad. The reports generally agreed that George W. Bush, reportedly commenting “in reassuring terms” about the alliance between the RoK and the US, had expressed support for the South Korean President’s policy of engagement with the DPRK, and reaffirmed the US commitment to the 1994 ‘Agreed Framework’. Kim Dae-jung was said to have urged the US to resume negotiating with the DPRK as soon as possible, to help it continue “on the path of change”, and had pointed out that it was “our responsibility and duty to seize this opportunity we have for peace”, stressing that there was only a narrow “window of opportunity” to continue where the previous Administration had left off. Most reports also claimed that George W. Bush had made clear he did not intend to do so anytime soon. He was quoted as having stated several times that the US still regarded the DPRK as a threat and was currently undertaking a comprehensive review of its relationship with that country. At a subsequent joint press conference, Bush did say that he looked forward to “at some point in the future, having a dialogue with the North Koreans”, but he added that “any negotiations would require complete verification of the terms of a potential agreement”. Stressing the concept of verification, he further stated that “any agreement must make the Peninsula more peaceful and we must be able to verify that it is more peaceful” and “we want to make sure that their ability to develop and spread weapons of mass destruction was, in fact, stopped they’re willing to stop it — and that we can verify that, in fact, they had stopped it”. Bush again reverted to this issue at another point in the press conference, saying that “in dealing with North Korea, there is not much transparency. We’re not certain that they’re keeping all terms of all agreements”. A White House spokesman, responding to a journalist who asked what agreements this remark referred to, since there was only one agreement in force (the Agreed Framework) and even that was not a formal one, clarified that Mr. Bush had been concerned about future agreements.

Media reports speak of wide gaps in perception of the North Korean issue among members of the US Administration, with Vice-President Dick Cheney and Defense Secretary Ronald Rumsfeld taking a stand to the political right of Mr. Bush, while at least initially Secretary of State Colin Powell seemed to be more flexible in his references to the DPRK. The day before the summit meeting, Secretary of State Powell said that he saw “[s]ome promising elements” in the work done by the former Administration in trying to end the DPRK’s missile programme. He was quoted as saying that “we’ll be examining those elements” adding that “[We] think we have a lot to offer [the DPRK] if they will act in ways that we think are constructive”. After the meeting, reportedly called to order by Mr. Bush, Powell was seen to be less forthcoming, stating that the DPRK was “a threat, [with]

a huge army poised on the border” and with “weapons of mass destruction and missiles that could deliver those weapons”. He concluded by saying that “we’ll be formulating our policies and, in due course, decide at what pace and when we engage.” Soon afterwards, the Secretary of State was also quoted as claiming that the Agreed Framework might have to be reviewed, and adding stiff new conditions for any deal with Pyongyang. Observers of the Washington scene ascribed this apparent shift as a concession to harder-line elements in the Administration. A day later, however, in a statement before the Senate Foreign Relations Committee, Secretary Powell was reported to attempt reconciling the comments he and other US officials had made about the DPRK situation, by speaking harshly of the North Korean regime but also saying that elements of the former Administration’s negotiations were “very promising”. He was also heard to say that he might try to enlarge future missile negotiations to include US “misgivings” about the number of DPRK troops deployed along the border. At that time, Powell also noted that the US was “monitoring” the Agreed Framework and was continuing to support it.

In a briefing for the press, a few days after the summit meeting, the State Department denied there had been disagreement between Messrs Bush and Powell. Its spokesman tried to clarify the Secretary’s remarks by explaining that, while the previous Administration had left “a set of concrete ideas” about the reduction of the North’s missile production, what was missing was “how one would put in place any kind of monitoring or verification regime”. Officials have also denied that there had been an intention to accuse the DPRK of violating the Agreed Framework. The reports about the summit meeting are said to have left foreign policy experts in Washington uncertain as to the actual policy of the Administration in regard to the DPRK. Some blame poor staff preparation for what is widely seen as a counter-productive event; an opinion piece in the Los Angeles Times described it as “a diplomatic train wreck”. Some commentators ascribe the negative results of the meeting in part to what they see as Mr. Bush’s lack of interest in nuance, which may have caused a problem with his South Korean counterpart, although Republican observers are said to feel by and large that Mr. Bush correctly reflected their approach. Some of the latter have been quoted in the press as saying that General Powell had overstepped his authority and was called back just in time.

The contradictions among the statements coming from Washington — described in the 9 March issue of the conservative daily *The Washington Times* as “mixed messages and public confusion” — have led many commentators to the conclusion that, as one formulated it, “the Administration is still writing its North Korea policy.” During a State Department briefing, its spokesman said that there were six “essential elements” to any new DPRK policy, viz. consultation with Japan and South Korea and having them consult with the US on their moves with respect to the North; support for President Kim Dae-jung’s policy of reducing tensions; realism about the nature of the DPRK’s regime, i.e., “a clear understanding of this regime, no illusions about what they are and why they are willing to open up a little at this point”; review of the US policy in its entirety, which was currently going on; the need for verification and monitoring; and the emphasis on the North’s proliferation activities, missile developments and exports, which were

“of concern to the entire Administration”. At the same time, experts in the US as well as in Japan, South Korea and the UK, warned that — as one put it — treating Pyongyang like an enemy would ensure that it becomes one. Democrats in both Houses of the US Congress have urged Mr. Bush — in the words of the highest-ranking Democrat on the Senate Foreign Relations Committee, Joseph Biden — to engage North Korea in a serious diplomatic effort. Biden stressed that it was “vital that we do not drop the ball, miss an opportunity to end North Korea’s deadly and destabilizing pursuit of long-range missiles.” Biden said he was “puzzled and disappointed” by the abrupt change in tone adopted towards North Korea at the time of the RoK President’s visit. Senior officials of previous Administrations, and members of think tanks specialized in East Asian affairs have expressed concern at the White House’s obvious aversion to a more forthcoming policy, but statements from Administration officials and editorials in conservative print media confirm that the current political course almost certainly excludes the possibility of positive overtures to Pyongyang.

Among arguments recognised in Washington as leading to the reluctance of US administrators and conservative politicians to hasten following up on the concessions Pyongyang seems to have been willing to grant the Clinton Administration is their innate mistrust of the Communist North Korean regime. Equally important, however, in the eyes of many observers, is the consideration that as long as North Korean long-range missiles can be cited as a threat to the US, and the DPRK can be counted among ‘rogue nations’ — a term once again in fashion rather than the previous Administration’s usage of ‘states of concern’ — this represents a justification for the deployment of ballistic-missile defence systems; perhaps even the principal one. According to these experts, therefore, the Bush Administration should not be expected to try seriously to reach an early accommodation with the North on its missile programme, even if not doing so results in an increase of tension in the region. American media also made much of the of the claim, reportedly made by Israeli Prime Minister Sharon while visiting Washington, that much of Iran’s ballistic missile technology originated in North Korea.

At the March meeting between Messrs. Bush and Kim, the issue of NMD, particularly in the context of relations with the North, appears also to have been a subject of dispute. As reported in the news media, most of them South Korean, the joint press statement issued after the meeting reflects concessions in this regard by both sides. Apparently, the US sought RoK support for NMD in return for its backing Seoul’s policy of détente with regard to the DPRK. The RoK, on the other hand, was said to be unwilling to refer to NMD as more than a measure of last resort, to be used if all diplomatic efforts have failed. According to a senior Foreign Ministry official in Seoul, the reference in the statement to “a variety of measures, including active non-proliferation diplomacy”, before “defensive systems and other pertinent measures”, represents South Korea’s ‘conditional consent’ to the necessity of a US missile shield. According to this source, this is the first time that the Bush Administration has accepted the notion of “active non-proliferation diplomacy” as a first step to addressing threats from ‘rogue states’.

At the joint press conference, South Korea’s President Kim Dae-jung, who said there were many problems remaining, emphasised that his country would try to advance the dialogue with North Korea and would consult with the US “every step of the way”. His wording, and the reiteration of the term “frank and honest” in describing the conversation was taken by observers as meaning, in diplomatic parlance, that there had been disagreements. The US side appeared to have been concerned, for one, about Mr. Kim’s announcement that he planned to sign a “peace declaration” with the DPRK’s Kim Jong-il if the latter visited Seoul, later in the year. In general terms, the Bush Administration was said to disagree with President Kim’s view that the main problem with the DPRK was the insecurity of its regime, which could only be made worse by unnecessary confrontation. Several important American newspapers reported that Mr. Bush acted bored at the meeting and seemed annoyed with his visitor, especially for his defence of the ABM Treaty jointly with President Putin. Some have also taken Mr. Bush to task for humiliating his South Korean counterpart.

On returning to Seoul, the RoK’s President said he would reformulate his new approach to the DPRK in the light of his talks in Washington. There were reports that the rebuff he suffered there at the hands of the US Administration might have aggravated domestic criticism of his North Korea policy, but his senior staff were said to believe that, while he was “a little embarrassed” by the skepticism and suspicion towards the DPRK he had met in the US, there would be no significant change in Kim’s approach to Pyongyang. These officials also said that he hoped the event would not harm the inter-Korean thaw seriously. US media have been quick to point out that — as one influential daily put it — the “petulant and petty” way Mr. Bush has dealt with the North Korean issue has already led to the expected negative reaction in Pyongyang. On 26 March President Kim reformed his cabinet, replacing nine out of 22 ministers. Reports from Seoul explain that the changes pertain in particular to the President’s foreign policy and security team, and his new appointees are selected especially with a view to keeping the recent diplomatic controversies with the US from damaging his efforts to induce the DPRK to improve relations with both the RoK and the US. These reports stress that the President remains determined to pursue his policy of reconciliation with the North.

In the first few months of the year, rapprochement between the two Koreas had proceeded apace. The DPRK submitted a number of proposals for cooperation in such areas as fisheries, tourism, family reunions and river management. There were expectations both Korean states would be involved in a project of the United Nations Development Programme (UNDP) to preserve the environment around the Tumen River. Good progress was registered in talks held in late February on joint work to contain floods along the Imjin River, in the DPRK. At the request of Pyongyang, a new round of Red Cross talks on family reunions was advanced from March to January; resulting in another reunion of 100 separated families from each side on 26–28 February, in Seoul and Pyongyang. An altercation between escorting officials seems to have been quickly settled. For the first time, it was arranged also that in March, 300 separated families from each side were allowed to exchange letters. Reportedly, however, while the RoK renewed its demand for the establishment of a permanent meeting place near

Panmunjon, in the Demilitarized Zone, where families would be able to meet regularly, the DPRK expressed the wish to have the station located well inside its territory. So far, no agreement seems to have been reached. The two sides did agree to hold an inter-ministerial meeting, at Seoul, in mid-March.

In early February, the two sides were reported to have agreed on practical arrangements to reconnect the cross-border railway line and a parallel road linking Seoul and Sinuiju, including measures to avoid friction between the military involved in the project, such as the establishment of a military hot line. Implementation of these understandings was postponed, however, upon the DPRK's initiative. This was explained at first as necessitated by "administrative reasons", but it has since transpired that Pyongyang has been angered by a RoK defence white paper, in which the DPRK is mentioned as "the principal enemy". Reportedly, Pyongyang demanded that the concept of "principal enemy" should be dropped from the white paper as a precondition for further ministerial-level meetings, but later reports indicated that both sides continued preparing for that meeting, which was to be held in the first half of March. Work on the railway and the road resumed in early March, after a suspension of ten weeks. The project appeared to be on track for completion by early Autumn, but it turned out later that the DPRK had for over a month withheld its signature to the relevant agreement, so that work might again have to be suspended. Both Korean states were understood, meanwhile, to have accepted suggestions from Russia to discuss the restoration of further severed inter-Korean railway lines, so as to eventually create a connection with Russia's Eastern railway net and possibly extend the Trans-Siberian Railway to Seoul. Apparently, Russia, which in March concluded an agreement with the DPRK on linking rail networks, has said it might invest in the restoration project.

Inter-Korean talks, also held in early February, in Pyongyang, on measures to help the DPRK's energy shortage did not appear to have yielded concrete results. Reportedly, the RoK had said that it would consider the North's request only after the completion of a joint survey of power-line conditions, and of electric power needs, transmission and distribution. In the initial meeting, the DPRK is supposed to have rejected this, and reiterated its request to South Korea to supply it promptly with 500,000 kw of electricity. South Korean media have reported that the US wanted discussions on the supply of electricity to the North to be linked to implementation of the 1994 Agreed Framework, but Seoul appears to have told Washington that this was an inter-Korean issue.

As reported in Seoul, during his visit to Washington RoK President Kim Dae-jung told Mr. Bush that the DPRK now saw the US as a vital means for guaranteeing its survival, and was keen to improve relations with the Washington to bolster its security and help restore its economy. Pyongyang meanwhile let it be known, as it had done several times in the past, that it would seek to resume peace negotiations in the first place with the US, rather than with the RoK. On the other hand, soon after the Bush Administration entered on the scene, and reportedly both disappointed that President Clinton had not seen fit to visit the country and shocked at the newly hardened stance towards the DPRK reflected in statements by Republican officials — including one by Gen. Colin Powell, who used the term "dictator" in reference to the North Korean leader

— spokespersons in Pyongyang sharply criticised the new Administration, accusing it of seeking to establish political and military domination on the Koran Peninsula; Powell was referred to as a "scoundrel", who had the ulterior motive "to keep the two countries' relationship hostile to promote the interests of defence contractors and other conservative sectors of the society". In February, reportedly apprehensive of the new US Administration's review of its North-Korean policy, the DPRK Foreign Ministry, in an English-language broadcast, cited Washington's "burglar-like attitude" and threatened to abandon its moratorium on long-range missile tests and to resume its nuclear programme which it had suspended under the 1994 Agreed Framework. The Northern press also reflected Pyongyang's ire at a report from the US DoD, which stressed the need for a closer US-Japan security alliance. South Korean comments downplayed Pyongyang's threat, suggesting that it might be intended to prompt President Kim Dae-jung to persuade Mr. Bush not to take too harsh an attitude to the North, and to support inter-Korean rapprochement, but senior Washington officials warned that threats of this kind would be counter-productive. They pointed out that the attitude of the Bush Administration to the DPRK would be predicated primarily on the extent to which the latter could show that it was adhering to its undertakings, and stressed that this would be carefully monitored. In a press statement made in mid-March, the commander of US forces in the Pacific area, Admiral Blair, said he "defined" North Korea "the No.1 enemy state" in his area of responsibility, but he added that chances of a conflict were "very low".

A few days after the RoK-US summit in Washington, the DPRK cancelled the inter-Korean ministerial meeting at short notice. No reasons were given, beyond the statement that circumstances necessitated a delay. Press comments in Seoul reflected the view that the move was meant as a signal of Pyongyang's anger at the negative comments made in Washington about the DPRK and its Leader. Pyongyang has since also postponed scheduled Red Cross talks on family reunions; this, too, is seen in Seoul as a message to the US. In the last two weeks of March, Pyongyang repeatedly denounced the US Administration in harsh terms, saying it had made amply clear had no intention to improve relations. An editorial in one official newspaper threatened "thousand-fold revenge" if the "US imperialists" were to turn to confrontation. While Pyongyang's official news agency subsequently adopted a more conciliatory tone, expressing the hope that relations with Washington would improve, in the last days of March anger was expressed again, against supposed US attempts to block the unification of Korea, and about a military communications exercise in the South. The initial statement appeared to avoid criticising South Korea, but this was followed by virulent criticism of the new RoK Defence Minister, who was accused of "warmongering". Observers were surprised by the attack, which some took as indicating that the reconciliation process had come to a standstill, presumably as a result of Washington's negative stance. A senior British diplomat, who had been in Pyongyang a few weeks earlier reported that officials there had expressed the hope that the inter-Korean rapprochement would be able to continue, and in late March comments from Seoul expressed confidence that the ministerial-level inter-Korean talks would resume soon. A positive signal had also been seen in the mission of a North Korean delegation to Seoul to

the funeral of the founder of the South Korean Hyundai company, who died in March; the four-member group conveyed Kim Jong-il's condolences and presented a large wreath on his behalf.

Shortly before the new US Administration took over, in January, Washington had imposed economic sanctions on the North Korean 'Changgwang Sinyong Corporation' for exporting missile technology to Iran. The sanctions, which would prohibit American entities to trade with that firm, were to run until 6 April 2002. Since the firm appeared not to be officially listed, it was assumed to be run by the DPRK military.

In the early months of 2001, there were suggestions in Seoul, Tokyo and Washington, that the Bush Administration – reportedly persuaded by its experts that the two light-water nuclear reactors the DPRK was promised in the Agreed Framework of 1994 would be neither safe nor sufficiently proliferation resistant, and disinclined to accept assurances on this matter from the Korean Peninsula Economic Development Organization (KEDO) – might wish to change the Agreed Framework or abrogate it altogether. One possibility bruited in Washington was that the US would urge its partners to supply oil-fired electric power stations, rather than providing nuclear reactors. In Seoul, experts commented that this would most probably not be acceptable to Pyongyang. As reported, RoK and US delegates to KEDO in February dismissed a possible change in the reactor provision programme. In March, a senior RoK official dismissed the suggestion as unrealistic, since it would involve a long and difficult process of amendment – assuming the DPRK would consent to have any changes made – and thus would neither shorten the construction period nor reduce costs. Meanwhile, three leading Republican Congressmen, Cox, Hyde and Markey, wrote to Mr. Bush advising him not to commit himself to the Agreed Framework, to retain the flexibility to renegotiate it and to provide conventional instead of nuclear power plants. A decision by the US Administration as to the policy it should adopt in this matter was seen as a matter of urgency, since the government authorisation for the export of nuclear technology to the DPRK would expire in May, and renewal would require presidential approval. Meanwhile, reportedly, senior Administration advisers, critical of the Agreed Framework – which many of the new Washington dignitaries condemned because it promised “a reward for blackmail”, and which the new Deputy Secretary of Defense, Paul Wolfowitz, in the Republican terminology for a workable arrangement devised by Democrats, called “deeply flawed” – were recommending that the export should not be approved. A senior American diplomat pointed out that under the Agreed Framework, certain reactor parts could be provided only once the DPRK was meeting its safeguards obligations under the agreement with the IAEA; he said that the US would insist on full compliance with that provision.

A recent disclosure, that the previous US Administration would have been inclined to press the IAEA, if need be, to overlook a discrepancy between the plutonium inventory declared by the DPRK and the findings of IAEA inspectors in their effort to reconstruct the history of the North Korean nuclear programme, was seen as weakening this argument, however. Reportedly, in 2000 the IAEA had told the US that it had no confidence that the DPRK would ever give it access to the sites American

intelligence had identified in 1993 as containing highly radioactive waste from the reprocessing fuel irradiated in the research reactor. It would therefore be unable to verify if all the DPRK's plutonium had been accounted for. It has now been reported that if this would have become necessary in order to keep the Agreed Framework alive, the US would have urged the Agency to ignore a difference of up to two kilograms of plutonium. How the Agency would have reacted was not made clear, but it apparently was the view of the US that the main aim was not keeping track of the plutonium produced by the DPRK in the past, as appeared to be the preoccupation of the IAEA's safeguards officials, but preventing it from making nuclear weapons in the future.

In his most recent report to the IAEA's Board of Governors, the Agency's Director General is understood to have said that verification of the correctness and the completeness of the DPRK's initial declaration on its nuclear-material holdings would probably take three to four years, and would require full cooperation from Pyongyang which at this stage was not forthcoming. He also said that implementation of the NPT safeguards agreement “remained at a standstill” and that no change in the situation seemed likely in the near future. The Agency, according to the Director General, was still unable to verify the accuracy and completeness of the DPRK's report on all nuclear material in the state. The Director General added that the Agency maintained a continuous inspector presence in the Nongbyong area for the purpose of monitoring the “freeze” on the DPRK's graphite-moderated reactors and related facilities. Two Republican advisers, Victor Gilinsky and Henry Sokolski, are said to have urged the Administration to insist on full compliance by the DPRK with the Agreed Framework, and to demand that it should open its operating records and nuclear installations to Agency inspection. They propose that the US should “pace” the construction of the light-water reactors to the level of cooperation received from the DPRK.

In March, a South Korean think tank affiliated with the RoK Ministry of Foreign Affairs said that the DPRK was believed to be capable of making one or two nuclear bombs, and called for early verification as to whether it had fully given up its suspected nuclear-weapons programme. Lately, senior American military sources have stressed the increasing quality and strength of the North's forces. In early March, South Korean media reports alleged that US and RoK intelligence had concluded that in the past two years the North had produced and deployed 50 Rodong-1 missiles, with a range of up to 1,300 km (800 miles), bringing the total of deployed Rodong-1 missiles to 100. It was also claimed that the DPRK had violated its moratorium on test-firings by conducting several engine propulsion tests of the Taepodong-2 missile, which is thought to have a range between 4,000 and 6,000 km (2,500-3,750 miles). Twenty of the Rodong-1 missiles were supposed to have been deployed at a new underground base. A senior official of the Defence Ministry said that since September 1999, when Pyongyang announced that it would suspend its test firings, no signs of production or deployment of missiles had been detected. The same official was quoted as saying that construction work was underway at the underground missile base, but that there was no evidence of missile deployment there.

Meanwhile, East Asia experts were said to be unsure about the new US Administration's intention regarding the Agreed Framework. Reassurances from senior American officials after the Kim-Bush summit of early March that the US government intended to continue implementing the deal were not widely accepted as conclusive, in light of the contradictory statements that followed. In mid-March, the influential Republican Chairman of the Foreign Relations Committee of the US Senate, Jesse Helms, said that the US should abandon the Agreed Framework – to which Pyongyang reacted by saying that if this was the will of the US, then the DPRK need no longer adhere to its commitments either; it warned that abandoning the Agreed Framework would be “tantamount to a declaration of war”. In late March the issue arose again, when Washington sources revealed that the Bush Administration would look at the Agreed Framework as part of its review of US policy toward the DPRK. One senior official was quoted as having said that “we’re not walking away from [it]... we always leave open the possibility of improving something like this [sic]”. The same official is supposed to have said that “[w]e’re looking to see if the assumptions remain valid and does it need to be fine-tuned or do we need to change major elements of it”, adding that “There is no time limit” and “It’s not predetermined that we want to change [it]”.

On 26 March a high-level, bipartisan working group on Korea of the US Council on Foreign Relations released a letter to George W. Bush, which was reported to say that circumstances required a fresh look at the Agreed Framework and to urge him to consider possible revisions which, however, should not be made unilaterally. The letter was further understood to say that together with the RoK, Japan and the EU, a “deliberate and careful review” should be undertaken of the status of the Agreed Framework, focusing on the remaining challenges to full implementation and potential opportunities to engage North Korea on a review of the terms to meet Pyongyang’s immediate energy needs. The letter was said to urge the continuation of support to South Korea’s efforts at cooperation and reconciliation and the resumption of talks aimed at the elimination of the North’s missile programme.

On the same date, the first round of the tri-partite consultations between Japan, the RoK and the US to be held under the new US Administration took place in Seoul. According to the US State Department, parties “expressed their strong continued support for [the RoK’s] policy of engagement with North Korea and President Kim’s leading role...” Notably, the three sides reaffirmed their commitment to “continue the 1994 Agreed Framework”.

For some time, there has been talk of serious concern among Asia experts that even if the Agreed Framework were left unscathed, given the inordinate delay in the construction of the promised light-water reactors which now are not expected to be finished until 2007, the DPRK — which has accused both KEDO and the US of foot-dragging — might feel justified in threatening to restart its nuclear arms programme. The delay was expected to worsen as a result of the decision of the US General Electric Company, which was to have supplied the turbine generator technology, to leave the project. A consortium of the Japanese firms of Toshiba and Hitachi were said to be ready to take over this function. Yet another cause of delay is seen in the North’s insistence

that the wages of its workers, which were initially set at \$110 a month, should be increased to \$390, pending which its workers went on strike. In March it was reported that KEDO had hired 207 Uzbek workers to help in the project. Several South Korean and American critics of the reactor project, who clearly recognise the shortcomings of the Agreed Framework and the practical difficulties involved in planning and construction, still think that canceling the arrangement would be dangerous and that it has become virtually unthinkable to stop trying to implement it.

KEDO has started discussions with the DPRK on the creation of a nuclear regulatory system to ensure the safe operation of the reactors, and it has asked the IAEA to make a design safety review of the Korean Standard Nuclear Power Plant model that will be provided to the DPRK. Ambassador Charles Kartman, former US Special Envoy for Korean affairs, has been named to succeed Desaix Anderson, whose term as KEDO’s Executive Director has expired.

In January, the Netherlands established diplomatic relations with the DPRK. Its ambassador to the RoK will also function as the ambassador to the DPRK. Also in January, the DPRK accepted Belgium’s proposal along the same lines, but an agreement still needed to be worked out. In February Canada announced that it had established diplomatic relations with the DPRK. While its envoy to Beijing will assume the ambassadorial function, the DPRK has said that it intends to establish a resident mission in Ottawa. The UK said it would soon open its embassy in Pyongyang. Germany announced it had made progress in talks with the DPRK on the establishment of diplomatic relations and had negotiated a protocol which, in what is seen as a significant diplomatic move, would enable diplomats, relief workers and journalists to move freely through North Korea. Diplomatic relations between the DPRK and New Zealand were formally established on 26 March. A senior DPRK diplomat was set to travel to Paris in early April to discuss establishing formal relations. The EU announced it was preparing the possible establishment of relations with Pyongyang and was consulting member states on the issue. In late March, the DPRK’s Deputy Foreign Minister visited Prime Minister Goran Persson of Sweden, which holds the Presidency of the European Union, expressing his country’s readiness to have a dialogue with the EU on the missile issue. The EU announced that Persson would visit Pyongyang and Seoul in May, together with the organisation’s chief foreign policy negotiator, Xavier Solana, and Chris Patten, its External Affairs Commissioner. As reported, the purpose of the visit was to “express [the EU’s] support for the [reconciliation] process started by Kim Dae-jung”. As explained by Sweden’s Foreign Minister, with the current hard-line approach of the US Administration, Europe was called upon to “step in to help reduce tension between the two Koreas”. There had been reports that the move might at least partly have been in response to expressions of disappointment from South Korea’s President Kim Dae-jung, after his visit to Washington. The EU said that the decision to send the mission was taken after consultation with the US. The RoK government denied that President Kim had asked the EU to make up for the American hesitation to promote Korean reconciliation, and announced it would file a protest with the *Washington Post*, which published a report to that effect.

In January, North Korea's leader Kim Jong-il paid a five-day visit to China. South Korean sources connected the visit with Kim Jong-il's eventual trip to Seoul — which, reportedly, he confirmed he was determined to make, but only when there was a good chance that substantial agreement can be reached on peace between the two sides — and there were also suggestions that it served as an opportunity to consult on the question of relations with the new US Administration. Subsequent press reports claimed that the trip enabled the North Korean leader to acquaint himself personally with China's liberalised economy, of which he was said to have expressed admiration and which he was thought to see as an example his own country should follow.

There have been reports from South Korea that the DPRK's grain crop fell by 15 per cent from the year before. Bad weather was blamed for the shortfall. A British radio report in early January said that people in the DPRK are "literally starving to death". Aid agencies were said to have estimated that up to two million people have died since the mid-1990s as a result of acute food shortages and economic mismanagement. Although the food shortage was believed to be less serious than a few years ago, the situation was thought to have worsened as a result of the deterioration of the infrastructure, especially the health and sanitation systems and the energy supply. The UN's World Food Programme said that in 2001 it would provide the DPRK with 810,000 tons of food and \$93 million in assistance, such as vitamin-enriched grain, crackers and noodles, for distribution to selected population groups. The annual human rights report compiled by the US State Department claimed that since 1995, one million DPRK citizens had died of starvation and related diseases. Washington expressed concern to the RoK that, as it alleged, food aid to the North was being transferred to the DPRK's military. As reported, it was the view of the US Administration that international assistance was contributing to reinforcement of the DPRK's forces, and American intelligence sources claimed that, although they had no detailed evidence that aid was being diverted to the military, any form of outside assistance could be used to strengthen the DPRK military and shorten the development period for ballistic missiles and their production.

(WP, 29/12/00, 5/3, 7/3, 8/3, 15/3, 25/3; CBS News, 31/12/00; IHT, 4/1, 6-7/1, 26/2; NW, 4/1; R, 5/1, 31/1, 20/2, 27/2, 5/3, 6/3, 7/3, 21/3, 23/3, 26/3; AFP, 6/1, 16/1, 30/1, 6/2, 19/3; CHI, 6/1, 10/1, 30/1, 1/2, 6/2, 8/2, 10/2, 15/2, 22/2, 23/2, 4/3, 11/3, 12/3, 18/3, 20/3, 22/3, 25/3, 28/3; KH, 6/1, 8/1, 11/1, 12/1, 16-18/1, 29-31/1, 7/2, 12-14/2, 20-23/2, 4-8/3, 13-15/3, 20/3, 22/3, 24-30/3; JAI, 10/1, 12/1, 28/1, 31/1, 1/2, 5/2; AP, 16/1, 17/1, 21/1, 25/1, 26/1, 29/1, 30/1, 2/2, 8/2, 12/2, 14/2, 19/2, 22/2, 23/2, 26/2, 27/2, 5/3, 6/3, 8/3, 9/3, 15/3, 18/3, 20/3, 22/3, 23/3, 25/3, 26/3, 30/3; US Department of State, 17/1, 7/3, 8/3, 9/3, 27/3; LAT, 29/1, 28/2, 9/3, 27/3; Letter from Nonproliferation Policy Education Center (H. Sokolski) to KEDO, 29/1; X, 31/1; WSJ, 31/1, 27/3; China Daily, 1/2, 9/2; KT, 1/2, 5/2, 7/2, 21/2, 27/2, 6/3, 9/3, 19/3; Sankei Shimbun, 11/2; WT, 12/2, 9/3; NYT, 20/2, 22/2, 23/2, 28/2, 2/3, 6/3, 7/3, 8/3, 9/3, 14-16/3, 24/3, 25/3, 27/3, 29/3, 31/3; CNN On-line, 22/2; NG, 28/2; Nihonkeizai Shimbun, 2/3; Daily Yomiuri, 3/3; White House Press Office: Joint Statement between the United States of America and the Republic of Korea, and

Transcript of remarks by George W. Bush and Kim Dae-Jung at press conference, 7/3, Transcript of press background briefing, 8/3; Yomiuri Shimbun, 7/3; NW, 8/3, 15/3; Sankei Shimbun, 8/3; USA Today, 8/3; CSM, 9/3, 15/3; Newsweek, 19/3; direct information)

- In mid-January, **India** successfully staged the second test-launch of its Agni-2 ballistic missile, said to be an upgraded, solid-fuelled version of the intermediate-range Agni ballistic missile. As reported, Agni-2, which is seen as a key element in India's plan to develop a minimum nuclear deterrent, has a range of 1,250 miles (2,000 km — a Russian report gives its range as 2,500 km) and is capable of carrying a payload of one metric ton, including a 200 kt nuclear warhead. The production cost is estimated to be between \$4.5 and \$8 million. India is thought to have up to 20 Agni-2 deployed in a mobile launch mode. An Agni-3 missile with a range of 2,200 miles (3,500 km) is said to be in the planning stage, but no deadline appears to have been set for it. India's Defence Minister, George Fernandez, who resigned in March, announced that Agni-2 had reached "operational stage" and was ready for mass production. **Pakistan** is thought to have its own 2,500-km-range Haider-1 missile and there are press reports claiming that its medium-range Shaheen-1 missile — which is supposed to be the answer to the Indian Prithvi missile — and the intermediate-range Shaheen-2 — which is claimed to match Agni-2 — are not only in regular production but have already been inducted into the armed forces. While critics see this claim as unfounded since, they say, there has been no test-launch of Shaheen-2, Pakistani officials are quoted as saying that simulations staged in highly-advanced testing facilities have confirmed the performance of the missile. These officials also alleged that the Agni flight had been "extremely unstable", in contrast to Shaheen missiles.

In February, India tested its Akash surface-to-air missile over the Bay of Bengal. The missile is said to be India's most sophisticated air-defence missile.

After hearing of the test, China stated that it wished to work with the international community to prevent an arms race in South Asia. Japan and the UK expressed their concern at the test.

Also in India, a short-range ballistic missile exploded as workers prepared to display it before the country's Defence Secretary. The explosion is said to have killed the quality control inspector and injured ten others.

(AP, 4/1, 17/1, 27/2, 7/3; AFP, 18/1; H, 18/1; NG, 18/1; R, 18/1, 8/2, 7/3; WP, 18/1; News [Islamabad], 5/2)

- The daily newspaper *The News*, which is published in Islamabad, **Pakistan**, basing itself on the British military journal *Jane's Intelligence Review*, has asserted that Pakistan had made greater progress in implementing effective nuclear-weapon systems and procedures than has **India**. According to the newspaper, "Delhi has proceeded at a slower pace, insisting on creating an original Indian system; Pakistan has more fully implemented the lessons it has learned from the already established nuclear powers". One difference highlighted in the article was that the leadership in Delhi had not "fully thought through the specifics of nuclear use or doctrine. It does not view nuclear weapons as possessing military utility and discounts the likelihood that they would be used on the battlefield". Pakistan's nuclear programme,

on the contrary, was said to be controlled by the Army and was fully incorporated into the country's military strategy.

As they have done before, India and Pakistan have exchanged lists of nuclear facilities which they have formally agreed not to target in the case of an armed conflict.

(Daily News, 1/1; NYT, 24/2; AP, 7/3; R, 7/3; Hindu, 25/3)

- A new American intelligence assessment is said to have concluded that Iraq has rebuilt part of its weapons infrastructure and reconstructed three facilities that used to be involved in the production of chemical or biological agents and had been monitored by the United Nations Special Commission in Iraq (UNSCOM). The report was released on 10 January by the outgoing Secretary of Defense and was expected to play a role in the formulation of the Bush Administration's Iraq policy. Media comments point out that in 1998, the US claimed it had "set back" Iraq's weapons programmes "by a year or two" – this period has now elapsed. Officials in Washington have said there was circumstantial evidence that production had resumed at chemical warfare plants in Iraq, but the US DoD said on 23 January that it lacked firm evidence that Iraq had accelerated its effort to rebuild a chemical and biological-weapons arsenal. In February, the German Federal Information Service (BND) said it had evidence that Iraq could have nuclear weapons within three years, and that in 2005 it would be able to launch a missile that could reach Europe. The BND also claimed to have evidence that Baghdad had resumed the manufacture of chemical weapons and had increased foreign purchases of materials needed to make biological warfare agents. It did not rule out the possibility that production of biological weapons might already have begun.

On 22 January, the Bush Administration warned Iraq that it should "live up to the agreements [it has] made with the United Nations, especially regarding the elimination of weapons of mass destruction". Washington sources said it was too soon to say what steps would be taken to ensure Baghdad's compliance. In February, while on a tour of the Middle East, the new Secretary of State, General Colin Powell, who had repeatedly stated that the US should not seek tougher UN sanctions against Iraq but should concentrate on the elimination of its weapons of mass destruction, discussed a plan to modify the sanctions by letting in more supplies for the civilian population but sharpening controls on the importation of items that could assist Iraq's weapons programmes. Powell's plan was said to have been well received among countries in the region. Iraq's immediate reaction was negative. Iraq's Foreign Minister, at the UN for discussions for the first time in several years, dismissed his ideas as "a ploy to deceive public opinion". The Minister also said that under no condition would there ever be any further UN inspections in his country. It was expected, however, that the discussions would be continued.

Within the US, Powell's approach was said to have run into strong opposition from Conservative members of the Administration, including Vice President Cheney and Defense Secretary Rumsfeld, who were said to seek a more hard-line approach, as well as from conservative press media, where Powell's approach was criticised as

overly soft towards a ruthless enemy who could be subdued only by the use of force. Republicans within and outside the US Congress uttered ever-louder calls for armed support to Iraqi opposition groups, in hopes that Saddam Hussein's regime could be overthrown by resistance from within Iraq. That issue seemed to be leading to friction between the US Defense Department, where Donald Rumsfeld was reported to plan creating the post of 'transition coordinator' to work actively with Iraq resistance groups, and the State Department, which has long been against giving the Iraq National Congress the 'lethal training' it has sought for the last few years, with support from Republican politicians. The issue was said to be growing into a "turf war" between the Departments of State and of Defense. Meanwhile, in light of the different signals given by various members of the Bush Cabinet, the outcome of the US review of its Iraq strategy remained unclear, but in late March the White House was reported to be working on a plan to change the sanctions on Iraq into measures mainly designed to prevent military supplies entering into that country.

Reportedly, under the American plan, most of the present economic sanctions would be eliminated and restrictions would focus on imports and revenue that could be used for Iraq's military programmes, particularly the development of weapons of mass destruction and their means of delivery. Tighter controls on trade and oil revenue would be combined with incentives to neighbouring countries to cooperate in enforcing import restrictions. Monitors working under the auspices of the UN Security Council would be stationed in countries bordering on Iraq to work with customs officers to prevent smuggling, as well as at airports permitted to handle air cargo to Iraq. These monitors would not take the place of UN inspectors, on whose return the Security Council would continue to insist. The plan, which was said to provide in part for unilateral US actions, partly for UN action, including, possibly a new Security Council resolution, appeared in its basic approach to have the support of a number of European governments.

British-American air action over Iraq, which had resumed early in the year, had created the impression that the new Administration would put greater emphasis on the use of force than its predecessor. Following reports that Iraq's use of anti-aircraft artillery and surface-to-air missiles had strengthened lately, on 16 February British and American aircraft – reported to be acting in 'self-defence' – attacked command posts and radar installations outside the no-fly zones, in the vicinity of Baghdad, reportedly causing civilian casualties. Shortly thereafter, Washington sources claimed that Iraq's air defence had benefited from assistance by China, which had helped Baghdad construct a net of fibre-optic communications to integrate various elements of the anti-aircraft system. Reportedly, this would enable anti-aircraft artillery and missile launchers to use remote radar installations and avoid aerial attacks that would be attracted by the use of radars in the immediate vicinity. Later reports alleged that it had been the Federal Republic of Yugoslavia that had supplied the fibre-optic equipment, under a secret agreement with former President Slobodan Milosevic which also provided for the construction of bunkers, the training of personnel, and the provision of tactical advice. It seems that this assistance ceased with the advent of President Kostunica, and that subsequently it was Chinese technicians who continued

installing the fibre-optic network. The US Administration, refraining from direct accusations, was said to have sent "inquiries" to Beijing on the matter and asked for explanations. The initial reaction from the Foreign Ministry of the PRC was that the "accusation" was driven by "ulterior motives", but this statement was followed by the assurance from the Ministry that it was ready to investigate the complaints and by indications that a Chinese company – identified in the US as Huawei Technologies, a firm said to have tried for over a year to get UN approval to sell fibre-optic equipment to Iraq — might indeed have been involved. Beijing later assured the US Secretary of State that it had ordered the companies suspected by Washington of helping Iraq upgrade its air defence system, to halt their activities.

An Iraqi defector who claims that he helped oversee his country's nuclear-weapon programme, has claimed that Saddam Hussein has two nuclear bombs ready for use and is working to make more. The unnamed defector, described as a "military engineer", who is currently said to be in hiding in Europe, has alleged there are 64 facilities involved in the project, against 47 before UN inspections began.

In February, the London *Sunday Times* claimed to have found "compelling evidence" that in 1986, Iraq finished constructing a prototype of a gun-type nuclear bomb and that in 1989, it tested the device. The test was supposed to have been staged in a cavern under Lake Rezzaza, about 100 miles (150 km) southwest of Baghdad. It was supposedly 'decoupled' in such a way as to be undetectable. The newspaper claimed that the device had used HEU, which Brazil had bought in South Africa and delivered to Iraq; France was also alleged to have supplied HEU. The defector who was supposed to have provided this information also claimed that Iraq currently had "three Hiroshima-type bombs, three implosion weapons, and three thermonuclear weapons", all presumably stored in an underground bunker in the mountains north of the capital. The *Sunday Times* has since reported that information to this effect came from two senior scientists formerly with Iraq's nuclear programme.

According to the Israeli newspaper *Ma'ariv*, the IAEA has said that if international inspection is not resumed, Iraq would within three years be liable to "reach the stage of completing development of an atom bomb". Apparently, the same source has said that data collected after the Gulf War showed that within a five-year period Iraq would be able to complete construction of a bomb. Since inspection was halted two years ago, theoretically the Iraqis would need another two years to build an atom bomb. The report also says, however, that Iraq does not have the necessary fissionable material, and would presumably try to obtain this abroad. As to the allegations about a nuclear test, the IAEA source is said to have dismissed these as not matching what is known in Vienna about Iraq's nuclear programme, and also as improbable, since Iraq would not need to test, and given the dearth of fissionable material, a test would be "a luxury".

In January, IAEA safeguards inspectors checked the nuclear material remaining in Iraq, including natural and depleted uranium, pursuant to Iraq's safeguards agreement with the Agency. The Agency's Director General has underlined that these physical inventory verifications do not serve as a substitute for the verification activities required by the relevant resolutions

of the UN Security Council, and do not provide the needed assurances sought by the Council that Iraq is in compliance with its obligations under these resolutions. Sources in Israel have expressed concern that Iraq may be smuggling fissionable material from former East Block nations.

(*NYT*, 13/1, 14/1, 22/1, 23/1, 17/2, 28/2, 2/3; *AP*, 23/1, 24/1, 14/2; *Sunday Telegraph* [London], 28/1; *R*, 28/1; *Boston Globe*, 1/2; *WP*, 10/2, 18/2, 17/3, 26/3; *DT*, 22/2; *LAT*, 22/2; *LT*, 22/2; *China Daily*, 23/2; *Philadelphia Inquirer*, 25/2; *Iraq Radio Baghdad*, 27/2; *WT*, 27/2, 28/2, 1/3; *Sunday Times* [London], 25/2; *JDW*, 28/2; *WSJ*, 28/2; *New York Daily News*, 2/3; *Ma'ariv* [Tel Aviv] 15/3; *UPI*, 21/3)

- On 26 March, during a meeting in Paris, the **Republic of Korea (RoK)** joined the Missile Technology Control Regime (MTCR). For several months, sources in Seoul and Washington, had spoken of an agreement between the RoK and the US, that would enable the former to produce and deploy missiles with a range of 190 miles (300 km) and a warhead of 500 kg, and also to build missiles with a range of up to 310 miles (500 km) for research purposes. Seoul had also announced that it had adopted new guidelines on missile and commercial rocket development. It said it would develop missiles only for peaceful and commercial use and was planning to build a satellite launching station off its Southern coast. At the same time, there were unofficial reports from Seoul that the RoK planned to develop cruise missiles and that it would not permit US officials to inspect the research, manufacturing or deployment of its missiles. Seoul further said that its missiles would be capable of hitting targets in most of the DPRK. (*KH*, 9/1, 16/1; *AFP*, 17/1; *AP*, 17/1, 30/1; *US Department of State*, 17/1, 28/3)

- There is a report that in 1995, IAEA inspectors discovered that **Taiwan** was engaged in undisclosed nuclear research. Apparently, seven years before, the US and the IAEA had forced it to shut down a secret plutonium production programme. [The IAEA applies safeguards in Taiwan, which is not a party to the NPT, pursuant to the Agency's pre-NPT safeguards system contained in document INFCIRC/62/Rev.2, Ed.] As reported, the research may have involved the use of thorium-232 to produce U-233, which can be used for explosive purposes (*NW*, 15/2)

i. Nuclear Material Trafficking and Physical Security

- A former senior member of the alleged terrorist group headed by the supposed Islamic extremist Osama bin Laden has told a federal court in the **United States** that in 1993 his organisation had tried to buy uranium, presumably to make weapons with which to attack American targets. The man testified that he was ordered to buy from a Sudanese military officer a cylinder supposedly containing uranium of South African origin. He said he had been withdrawn from the transaction, and did not know if it had ever been completed. US experts are cited as stating that there is no evidence that Sudan or the officer in question ever had any uranium. (*WP*, 8/2)

j. Environmental Issues

- In 1996, the Taiwan Power Co. concluded a contract with the **Democratic People's Republic of Korea (DPRK)** for

the disposal of low-level nuclear waste generated in **Taiwan**, in Pyongsan, in the DPRK. At the time, the deal raised great concern in South Korea. Since then there were implications that implementation of the contract was dormant, as Taipower had no immediate needs for storage abroad and said it would not ship waste to a country that could not meet the appropriate environmental standards. On 14 February, the South Korean press reported that Taiwan and the DPRK were making final arrangements for moving waste from Taiwan to Korea. Allegedly, Taipower was planning to move 60,000 drums of low-level waste to Pyongsan. The news caused great concern in South Korea, where the government and opposition parties joined forces to urge Taiwan not to ship nuclear waste to the DPRK and the RoK government said it would start discussions with Taipei to prevent shipments of hazardous material to a contamination-prone site in the Korean Peninsula. Reportedly, the US government had also urged Taipei not to go through with the deal. (KT, 21/2; CHI, 22/2; NW, 22/2)

- In **Ukraine**, there are said to be plans to resume economic usage of part of the 30-km exclusion zone around the site of the Chernobyl-4 power reactor that exploded in 1986. Reportedly, Ukraine's authorities have concluded that part of the exclusion zone and of the larger zone of resettlement can be used for diverse economic purposes. Apparently, experts believe that the zonal boundaries were set using an excessively conservative approach, and that some parts have radiation levels comparable to those of other parts of the country. (NW, 15/2)

k. Miscellaneous

- In a reshuffle of the cabinet of the **Russian Federation**, on 28 March, Defence Minister Marshall Sergeyev was replaced by the previous head of the National Security Council, Sergey Ivanov. The Ministers of the Interior and of Atomic Energy were also dismissed. The dismissal of Marshall Sergeyev is expected to bring a shift in emphasis on conventional and away from nuclear weapons. The replacement of Yevgeny Ivanov as Minister for Atomic Energy — he is succeeded by Aleksandr Romyantsev of the Kurchatov Institute — is seen in Moscow as a significant move towards a non-proliferation policy. Ivanov was known for his efforts to increase Russia's nuclear exports, even where this seemed to clash with non-proliferation commitments. His departure is expected to reduce the likelihood that the proposal to import spent nuclear fuel will be realised. By a vote of 339 to 10, the Russian State Duma had already indefinitely postponed consideration of legislation that should make this possible. The reason for the postponement was said to be uncertainty how the \$20 billion the scheme was suppose to earn might be used, but according to comments from Moscow, there seems to be doubt as to authenticity of this amount, for which Adamov was cited as the source. (SF, 26/3; BBC, 28/3; PIR Press Release, 28/3; NYT, 29/3; PIR Information Letter, 30/3)
- The Center for Nonproliferation Studies (CNS) at the Monterey Institute for International Studies announced on 27 January that **Leonard S. Spector**, former Deputy Assistant Secretary for Arms Control and Nonproliferation at DoE would join CNS as a Deputy Director of that Center and Editor-in-Chief of all its

publications. He will be based in Washington, DC. (Direct information)

- The Uranium Institute in London has announced that John B. Ritch III has become its Secretary General, succeeding [former UK Ambassador] Gerald E. Clark, who fulfilled that function for the past seven years. Before assuming his new duties, Ambassador Ritch represented the US to the IAEA and the other UN organisations in Vienna, in which capacity he participated in the 1995 Review and Extension Conference of the NPT and the 2000 Review Conference, among other events. (UI Press Release)
- Conjectures about harmful effects of dust from the use of armour-piercing ammunitions tipped with **depleted uranium** (DU) and of armoured vehicles reinforced with that material, which have been heard ever since the Persian Gulf War of 1991, recently increased, following the death from cancer of a number of soldiers who had served as peacekeepers in parts of the former Yugoslavia. Reportedly, during the Persian Gulf War, hundreds of tons of such ammunition were used, while in the Kosovo conflict of 1999, US war planes are said to have used 31,000 (some reports say 40,000) rounds of uranium ammunition. There have been allegations of a growing number of military personnel suffering from leukemia and other cancers, which is linked to the inhalation of particles of DU and possibly other isotopes. A number of non-belligerents in Iraq (Baghdad authorities speak of "thousands of cases of leukemia, lymphoma and other cancers") were also said to have been affected, and some children born at or near sites where DU weapons were used were alleged to have serious birth defects.

In early January, public concern about the possibility that these phenomena were caused by the use of DU weapons arose in several European countries and became the subject of parliamentary debates. The NATO command and Western defence ministries appeared to have been unprepared for the sudden criticism. US Secretary of Defense William Cohen stated that DU "doesn't pose an unreasonable risk" and said there had been no scientific study that showed any connection between DU and leukemia. NATO authorities in Kosovo, reacting to public pressure, fenced-off a number of sites where DU ammunitions were known to have been used and put up signs warning of possible "residual heavy-metal toxicity". At a NATO meeting in Brussels, following reports of 44 cases of cancer, including leukemia, among Belgian, French, Italian, Netherlands, Portuguese and Spanish military personnel who had served in Bosnia and Kosovo in the past four years, of whom 17 had died, Germany, Greece, Italy and Norway asked for a ban on the use of DU reinforced ammunitions; the Netherlands announced it had never used them and would not do so. The majority of NATO members, led by the US, rejected the proposal.

[These 17 deaths are from a population in excess of 100,000 personnel. A study of all 53,000 British personnel that served in the Gulf during the Gulf War (and an equivalent number as a control group) show deaths from cancers of all types to the end of 2000 of 69 among the Gulf veterans and 77 among the control group — Ed.]

A report that for over a year, the US had been unwilling to respond to the request of the United Nations Environment Programme (UNEP) for information on places where DU ammunition and armour has been used,

created a public furor. Among the countries where the issue assumed a high profile was Italy, whose fisheries authorities were said to have started an investigation into negative effects of the habitual dumping of unused DU ammunition by American aircraft returning to their Italian bases. On the basis of the information eventually released by the US, UNEP was said to have ascertained that eight out of the eleven sites it visited showed low-level radioactive contamination and it called for all 112 locations in Kosovo where DU weapons were known to have been used to be cordoned off pending the results of tests. The World Health Organization (WHO) said there probably was little risk of radiation-linked leukemia from DU contamination. The UK and the US military, as well as Belgian and French health authorities, also discounted the likelihood of a link between the use of DU ammunition and cancer. Physicists and medical experts in several Western countries stressed the biological impossibility that DU had caused the cancers. One argument they cited was that the radiation level of the material ingested, if any, could only be a minimal fraction of natural levels; furthermore, as they pointed out, DU does not emit the gamma rays and x-rays that might cause leukemia. NATO also said that the presence of possible traces of highly radioactive elements such as plutonium and americium could be discounted because of their minute quantities.

Subsequently, it was disclosed that laboratories in Sweden and Switzerland had found minute quantities of plutonium; the Swiss laboratory had previously also noted the presence of uranium-236 in material collected by UNEP. Germany complained to the US Embassy in Berlin that it had not been informed of the hazards posed by the presence of U-236 and plutonium, and had merely been informed that "natural uranium" was being used but without any indication that the uranium had been extracted from material irradiated in a reactor, as the various trans-uranium elements indicated. The US responded that this had been openly documented and that the quantities were harmless.

NATO officials said the organisation remained concerned about health complaints and would continue to look for possible causes. In late January, NATO said that a committee of 50 nations, assembled earlier in the month, had not so far found evidence to support claims of a link between DU and cancer. Also in January, the European Atomic Energy Community (Euratom) began an investigation into the possibility of a causal relationship between DU ammunition use and cancer. It was announced later that month that the Director General of the IAEA and the Executive Director of UNEP had agreed to consider ways and means to respond to requests for fact-finding missions to Bosnia-Herzegovina, and the FRY, where DU was used during military conflicts. The two organisations would coordinate their action with WHO. Meanwhile, Australia, Belgium, Bulgaria, the Czech Republic, France, Germany, Greece, Hungary, Ireland, Italy, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, Ukraine and the UK announced screening programmes for soldiers; Germany and Italy called for a moratorium on DU deployment, as did the European Parliament. Romano Prodi, President of the European Commission, warned that if DU could not be verified as completely harmless, the EU would apply a total ban on its use.

Attention was drawn to the fact that in 1999, a "hazard awareness" paper from the US Joint Chiefs of Staff warned of potential health effects of DU use and called for special precautions, particularly with regard to uranium dust generated by artillery hits on armoured vehicles. This prompted critics to ask how the presence of a hazard awareness warning could be reconciled with the insistence of senior officials that the use of DU did not pose an unreasonable risk.

A report issued in early March by the European scientists tasked with the issue by the EC concluded that DU from weapons used in the Balkan conflicts does not have any observable health effects. The UNEP report that came out a little later reached a similar conclusion. While it deems the radiological and chemical risks from DU essentially insignificant, it says that DU contamination of groundwater could pose a toxic risk in the medium term and recommended that in areas where DU ammunition was used, groundwater should be regularly monitored. A preliminary Italian study has also concluded that there is no evident link between the use of DU ammunition and cancer among soldiers.

The US DoD has announced that it intends to continue to use DU ammunition. In February, the British military test-fired a new batch of DU shells at the Solway Firth estuary, in Scotland. Residents near the test site called for a moratorium on testing as long as concerns had not been allayed.

(**InterDependent**, Winter; **IHT**, 5/1, 6/1; **NYT**, 6/1, 7/1, 9-13/1, 4/3, 14/3, 21/3; **JDW**, 15/1; **WP**, 15/1; **LAT**, 16/1; **Jane's Defence News Brief**, 17/1; **NW**, 18/1, 25/1, 22/2, 8/3, 15/3; **IAEA Press Releases** PR 2001/1, 11/1, PR 2001/3, 25/1; **R**, 25/1)

- In 1990 the **United States of America** adopted legislation to compensate uranium miners who have worked for the American nuclear-weapons programme, for damage to their health. The Radiation Exposure and Compensation Act authorised one-time payments of \$100,000 to miners and their families as well as to persons who lived downwind from nuclear test sites in Nevada; in 2000, the US Congress increased the amount to \$150,000 and increased medical benefits. It has now been reported that the previous budget appropriation did not suffice to cover the expense of the programme and that payments are being held up, while the number of new applicants is growing. Further congressional action is said to be held up by uncertainty how the US federal budget surplus will be allocated. (**NYT**, 27/3)

II. PPNN Activities

- Over the last nine months, the PPNN staff have engaged in a sustained effort to develop a new programme for work in the period 2001–02, and obtain the necessary funds. This activity started from the assumptions that the global nuclear non-proliferation system remained the cornerstone of efforts to prevent further proliferation; that despite the ability of the May 2000 NPT Review Conference to adopt a Final Document, much work remained to be done to strengthen that system; that in-depth analyses of contemporary proliferation and non-proliferation developments and their global dissemination was an essential part of those efforts; and that when the NPT parties resumed their review activity

in 2002, one of their prime objectives would be to examine how the forward looking commitments contained in the Final Document could be implemented, and thus how progress in both nuclear non-proliferation and disarmament could be evaluated.

By mid-2000, a proposal was put together for PPNN's previous funders for a programme of work which, in view of anticipated funding constraints, would be less ambitious than that undertaken over the previous thirteen years. It involved limiting PPNN's activities in 2001 and 2002 to the continued production of the Newsbrief and the creation of a small international Working Group to examine the commitments made in 2000 and to produce a report on the differing interpretations of them and the options for implementation.

By the end of 2000, it had become clear that resource limitations would not permit even this limited programme of activities, and that some prospective funders would not support the continuation of the Newsbrief. As described in the Editorial Note above, it therefore became unavoidable that after the current issue publication would cease. All of PPNN's available resources are now concentrated on the creation and activities of the international Working Group. Invitations will shortly be sent to those whom PPNN will seek to involve in this work. The Group will make extensive use of electronic means to exchange draft texts and introduce comments, but it is anticipated that two meetings will also take place: one in the summer of 2001, mainly to discuss the subjects and issues that should be dealt with, and to allocate tasks among members, and one in early 2002, to discuss results and ways to put them together in a single report. It is hoped that this report can be issued in March 2002, in time for the first session of the Preparatory Committee for the 2005 NPT Review Conference.

Thanks are due to the Ford and John D and Catherine T MacArthur Foundations and the Japanese Atomic Industrial Forum for their financial support for PPNN's new programme.

It is too early at this stage to predict whether PPNN will remain in being after March 2002. What is clear is that many diplomats, researchers and university scholars have indicated there is a continued need for the educational, briefing, analysis and meeting functions such as those performed by PPNN. Its role has been particularly significant in these respects because of the lack of continuity among the national officials holding nuclear non-proliferation and disarmament posts, and the absence of any NPT secretariat or institutional memory. Whether in future such functions will continue to be performed by PPNN or by some other group remains to be seen. But it is PPNN's experience that there will remain an obvious need which somehow must be met.

III. Recent Publications

Books

Jozef Goldblat, editor, *Nuclear Disarmament: Obstacles to Banishing the Bomb*, with contributions by Shahram Chubin, Joseph Di Chiaro III, Jonathan Dean, Malik Azhar Ellahi, Yair Evron, Jozef Goldblat, Sverre Lodgaard, David Krieger, Alexander Nikitin, Graham S. Pearson, Vladimir Petrovsky, Joseph Rotblat, Lawrence Scheinman, Hiroharu Seki, Yitzhak Shichor, Jasjit Singh, Toshiyuki Toyoda and Herbert Wulf, I.

B.Tauris, London-New York, in association with the Toda Institute for Global Peace and Policy Research, 269 pp.

Avery Goldstein, *Deterrence and Security in the 21st Century: China, Britain, France and the Enduring Legacy of the Nuclear Revolution*, Stanford University Press, 356 pp.

Khidhir Hamza, with Jeff Stein, *Sadam's Bombmaker: The Terrifying Inside Story of the Iraqi Nuclear and Biological Weapons Agenda*, Scribner, New York, 352 pp.

T.V.Paul, Richard J. Harknett, and James J. Wirtz, editors, *The Absolute Weapon Revisited: Nuclear Arms and the Emerging International Order*, with contributions from Zachary Davis, Colin S. Gray, Richard J. Harknett, Ashok Kapur, Robert Manning, William C. Martel, Eric Mlyn, John Mueller, J.V. Paul, George Quester and James J. Wirtz, The University of Michigan Press, 320 pp.

T.V. Paul, *Power versus Prudence: Why Nations Forgo Nuclear Weapons*, McGill-Queen's University Press, Montreal, 2000, 227 pp.

Articles and other materials

Yevgeny Adamov, 'Russian Initiative Paves Way to Nuclear Security and Curbs Proliferation', [interview] *Yaderny Kontrol* (Nuclear Control) Digest, Vol. 6, No. 2, Spring, pp. 9-13.

Anatoly Alimov, 'Iran: Are WMD Out Of Reach?', *Yaderny Kontrol* (Nuclear Control) Digest, Vol. 6, No. 2, Spring, pp. 26-30.

Robert Alvarez, 'A long season of discontent', (Los Alamos), *Bulletin of the Atomic Scientists*, Vol. 57, No.1, January/February, pp.52-57

Catherine Auer, Bulletins: the 50-kiloton Test That No-One Noticed', *Bulletin of the Atomic Scientists*, Vol. 57, No. 2, March/April, p. 6.

Vladimir Baranovsky, 'US NMD Plans' International Political Implications', *Yaderny Kontrol* (Nuclear Control) Digest, Vol. 6, No. 2, Spring, pp. 19-25.

Rajesh Basrur, 'Nuclear Weapons and Indian Strategic Culture', *Journal of Peace Research*, Vol. 38, No. 2, March, pp. 181-99.

Aluf Benn, 'The Russian-Iranian connection', *Bulletin of the Atomic Scientists*, Vol. 57, No.1, January/February, pp.16-18.

Kenneth Bergeron, 'While No One Was Looking' [tritium production], *Bulletin of the Atomic Scientists*, Vol. 57, No. 2, March/April, pp. 42-49.

Philipp Bleek, 'Clinton Administration Approves "HEU Deal" Contact With Russia', *Arms Control Today*, Vol. 31, No. 2, March, p. 27.

Philipp Bleek, 'Independent Panel Urges Increased Threat Reduction Efforts in Russia', *Arms Control Today*, Vol. 31, No. 2, March, p. 26.

Philipp Bleek, 'Moscow Reportedly Moves Tactical Nuclear Arms to Baltics', *Arms Control Today*, Vol. 31, No. 1, January/February, p. 33.

Wade Boese, 'Bush Assembles Pro-Missile Defense National Security System', *Arms Control Today*, Vol. 31, No. 1, January/February, p. 29.

Wade Boese, 'NMD Gaining Ground in Europe; Russia Pushes Alternative', *Arms Control Today*, Vol. 31, No. 2, March, p. 24.

Tengiz Borisov and Svetlana Kovaleva, 'Underwater Radioactive Threat: How It Emerged', *Yaderny Kontrol* (Nuclear Control) Digest, Vol. 6, No. 2, Spring, pp. 40-44..

Fidel Castro Diaz-Balart, 'Some Remarks on the Role of Nuclear Energy Today', *Yaderny Kontrol* (Nuclear Control) Digest, Vol. 6, No. 1, Winter, pp.38-39.

Ralph A. Cossa, 'Prospects for Sino-US Arms Control', *Disarmament Diplomacy*, No. 53, December 2000/January 2001, pp.2-4.

Alan Cranston, 'Commit to Abolition', *Bulletin of the Atomic Scientists*, Vol. 57, No. 1, January/February, pp. 39-41.

Lewis A. Dunn and Victor Alessi, 'Arms Control By Other Means', *Survival*, Vol. 42, No. 4, Winter, pp. 129-140.

Michael Eisenstadt, 'Russian Arms and Technology Transfers to Iran: Policy Challenges for the United States', *Arms Control Today*, Vol. 31, No. 2, March, pp. 15-22.

Trevor Findlay and Oliver Meier, 'In verification we trust' [nuclear testing], *Bulletin of the Atomic Scientists*, Vol. 57, No.1, January/February, pp.13-15.

Sumit Ganguli, *Potential Indian Nuclear Force Postures*, CMC Occasional Papers, Cooperative Monitoring Center, Sandia National Laboratories, 24 pp.

Banning Garrett, 'The Need for Strategic Reassurance in the 21st Century', *Arms Control Today*, March, pp. 9-14.

Philip H. Gordon, 'Bush, Missile Defence and the Atlantic Alliance', *Survival*, Vol. 43, No. 1, Spring, pp. 17-36.

Shaun Gregory, 'A Formidable Challenge', *Disarmament Diplomacy*, No. 54, February, pp. 2-5.

Rohan Gunaratna, 'Transnational Threats in the Post-Cold War Era', *Jane's Intelligence Review*, Vol. 13, No. 1, January, pp. 46-50.

Chuck Hansen, 'Beware the Old Story' [nuclear testing], *Bulletin of the Atomic Scientists*, Vol. 57, No. 2, March/April, pp. 52-55.

William D. Hartung, 'Stop Arming the World', *Bulletin of the Atomic Scientists*, Vol. 57, No. 1, January/February, pp. 34-36.

Theresa Hitchens, 'The US Nuclear Debate' *Basic Papers*, No. 35, February, 4 pp.

Kees Homan & Bert Kremers, 'Een nieuw national anti-raketten schild: NMD als de Amerikaanse wensdroom en Europese nachtmerrie' ['a new national anti-missile shield: NMD, American dream and European night mare'], *Internationale Spectator*, Instituut Clingendael, pp. 8-13.

Sean Howard, 'Bush Team Stresses Missile Defence as Russia Champions ABM Treaty', *Disarmament Diplomacy*, No. 53, December 2000/January 2001, pp. 51-54.

Sean Howard, 'Moderation in Excess: NATO's Arms Control Review and the NPT Action Plan', *Disarmament Diplomacy*, No. 54, February, pp. 8-15.

'International Perspectives on Missile Proliferation and Defenses', *Occasional Paper*, No. 5, March, 75 pp. [A joint paper between the Center for Nonproliferation Studies and the Mountbatten Centre for International Studies. Includes contributions by Camille Grand, Darryl Howlett, Aaron Karp, Bernd Kubbig, Timothy V McCarthy, James Clay Moltz, Toshiro Ozawa, Waheguru Pal Singh Sidhu, John Simpson, Mark Smith.]

Rebecca Johnson, 'Breaking The CD Impasse', *Disarmament Diplomacy*, No. 53, December 2000/January 2001, pp. 16-23.

Piet de Klerk, 'Non-proliferatiestelsel: gezond maar kwetsbaar' ['the non-proliferation regime: healthy but vulnerable'], *Internationale Spectator*, Instituut Clingendael, pp. 14-20.

Piet de Klerk, 'IAEA Activities in the Light of the NPT Review Conference', *Yaderny Kontrol (Nuclear Control) Digest*, Vol. 6, No. 1, Winter, pp. 30-35.

Andrew Koch, 'India, Pakistan: Nuclear Arms Race Gets Off to a Slow Start', *Jane's Intelligence Review*, Vol. 13, No. 1, January, pp. 36-40.

Bernd Kubbig, 'The American Physical Society's Directed Energy Weapons Study: Genesis, Influence on the Strategic Defense Initiative, and Lessons for Renewed APS involvement during the George W. Bush administration', *PRIF Reports*, No. 49, January, Peace Research Institute, Frankfurt, 57 pp.

Mitsuru Kurosawa, *The 2000 NPT Review Conference and Nuclear Disarmament*, Osaka University Law Review, February, (reprint) 38 pp.

Jan Lodal, 'Pledging "No First Strike": A Step Toward Real WMD Cooperation', *Arms Control Today*, Vol. 31, No. 2, March, pp. 3-8.

Bret Lortie, 'Setting the Scene' [nuclear testing], *Bulletin of the Atomic Scientists*, Vol. 57, No. 2, March/April, pp. 50-52.

Kenneth Luongo, 'The Uncertain Future of US-Russian Cooperative Nuclear Security', *Arms Control Today*, Vol. 31, No. 1, January/February, pp. 3-10.

Arjun Makhijani, Hisham Zerriffi & Annie Makhijani, 'Magical Thinking' [transmutation of nuclear waste], *Bulletin of the Atomic Scientists*, Vol. 57, No. 2, March/April, pp. 35-41.

Jack Mendelsohn, 'The Bush Presidency: Reconsidering the CTBT', *Disarmament Diplomacy*, No. 53, December 2000/January 2001, pp. 5-7.

Richard Moore, 'Where Her Majesty's Weapons Were', *Bulletin of the Atomic Scientists*, Vol. 57, No. 1, January/February, pp. 58-64.

Harald Müller, 'Nearly Mortal Dilemma: The Europeans and the US Plans for National Missile Defense', *Yaderny Kontrol (Nuclear Control) Digest*, Vol. 6, No. 1, Winter, pp. 15-23.

Christopher Pala, 'And Now for the Really Big One', *Bulletin of the Atomic Scientists*, Vol. 57, No. 2, March/April, pp. 20-22.

William C. Potter, Nikolai Sokov, Harald Müller and Annette Schaper, *Tactical Nuclear Weapons: Options for Control*, UNIDIR/2000/20, 77 pp.

Matthew Purdy with James Sterngold, 'The Case of Wen Ho Lee', *The New York Times*, February 4 and 5.

Michael Quinlan, 'How Robust is India-Pakistan Deterrence?', *Survival*, Vol. 42, No. 4, Winter, pp. 141-154.

L Ramdas, 'Myths and Realities of Nuclear Command and Control in India and Pakistan', *Disarmament Diplomacy*, No. 54, February, pp. 5-8.

Gopi Rethinaraj and Clifford Singer, 'Going Global: India Aims for a Credible Nuclear Doctrine', *Jane's Intelligence Review*, Vol. 13, No. 2, February, pp. 48-52.

Douglas Roche, 'Stuck in the Middle? Canada's Record and Role in Promoting Disarmament', *Disarmament Diplomacy*, No. 53, December 2000/January 2001, pp. 8-12.

Annette Schaper, 'Principles Of The Verification For A Future Fissile Material Cutoff Treaty (FMCT)', *PRIF Reports*, No. 58, January, Peace Research Institute, Frankfurt, 29 pp.

Stephen I. Schwartz, 'Defining Reliable' [nuclear testing], *Bulletin of the Atomic Scientists*, Vol. 57, No. 2, March/April, pp. 55-56.

A. Shevtsov, A. Yizhak, A. Gavrish and A. Chumakov, *Tactical Nuclear Weapons: A perspective from Ukraine*, UNIDIR/2000/21, 86 pp.

Mark Smith, 'The MTCR and the Future of Ballistic Missile Non-Proliferation', *Disarmament Diplomacy*, No. 54, February, pp. 19-25.

Henry D. Sokolski, 'Mission Impossible' [counterproliferation], *Bulletin of the Atomic Scientists*, Vol. 57, No. 2, March/April, pp. 62-68.

Alex Wagner, 'DPRK Threatens to End Missile Moratorium, Nuclear Cooperation', *Arms Control Today*, Vol. 31, No. 2, March, pp. 28.

IV. Documentation

Joint Statement between the United States Of America and the Republic of Korea, The White House, 7 March 2001

President George W. Bush and President Kim Dae Jung of the Republic of Korea today reaffirmed the fundamental importance and strength of the U.S.-ROK security alliance, which has prevented war and promoted stability, prosperity, and democracy on the Korean Peninsula for over five decades. The two Presidents pledged to deepen further the comprehensive partnership shared by the United States and the Republic of Korea through enhanced security, political, economic and cultural cooperation.

The two Presidents agreed that reconciliation and cooperation between South and North Korea contribute to peace on the Korean Peninsula and lasting stability in Northeast Asia. President Bush expressed support for the Republic of Korea Government's policy of engagement with North Korea and President Kim's leading role in resolving inter-Korean issues. The two leaders shared the hope that a second inter-Korean summit will make a positive contribution to inter-Korean relations and Northeast Asian security.

Both Presidents reaffirmed their commitment to continue the 1994 Agreed Framework and called on North Korea to join in taking the needed steps for its successful implementation. They agreed to encourage North Korea to take actions to address the concerns of the international community. The Presidents agreed on the importance of maintaining close consultations and coordination on policy toward North Korea, both bilaterally and trilaterally with Japan.

President Bush and President Kim agreed that the global security environment is fundamentally different than during the Cold War. New types of threats, including from weapons of mass destruction and missiles as a means of delivery, have emerged that require new approaches to deterrence and defense.

The two leaders shared the view that countering these threats requires a broad strategy involving a variety of measures, including active non-proliferation diplomacy, defensive systems, and other pertinent measures. They concurred on the importance of consultations among allies and other interested parties on these measures, including missile defenses, with a view to strengthening global peace and security.

President Bush and President Kim noted that the United States and the Republic of Korea are developing more mature and mutually beneficial bilateral economic and trade relations. Both sides agreed to work together closely to support Korea's economic reform efforts and to address bilateral trade issues. The two leaders endorsed the early launch of a new round of trade negotiations in the WTO.

ANNEX — Abbreviations of Sources

| | | | |
|------------------|--|----------------|---|
| ACT: | <i>Arms Control Today</i> | LM: | <i>Le Monde</i> |
| AFP: | <i>Agence France Presse</i> | LP: | <i>La Prensa</i> |
| AP: | <i>Associated Press</i> | LT: | <i>Times [London]</i> |
| ASS: | <i>Asahi Shimbun</i> | M: | <i>Mena: Middle East Nuclear News Agency [Cairo]</i> |
| BBC: | <i>BBC Monitoring Summary of World Broadcasts</i> | MAS: | <i>Mainichi Shimbun</i> |
| CN: | <i>La Correspondence Nucléaire</i> | N: | <i>Nature</i> |
| CNN: | <i>Cable News Network</i> | NEI: | <i>Nuclear Engineering International</i> |
| Carnegie: | <i>Proliferation Brief of the Carnegie Endowment for International Peace</i> | NF: | <i>NuclearFuel</i> |
| CdS: | <i>Corriere della Sera [Italy]</i> | NG: | <i>Nezavisimaya gazeta</i> |
| ChI: | <i>Chosun Ilbo</i> | NN: | <i>Nuclear News</i> |
| CSM: | <i>Christian Science Monitor</i> | NNN: | <i>NucNet News</i> |
| DJ: | <i>Dow Jones Newswires</i> | NPR: | <i>National Public Radio News</i> |
| DP: | <i>Die Presse</i> | NW: | <i>Nucleonics Week</i> |
| DS: | <i>Der Spiegel</i> | NS: | <i>New Scientist</i> |
| DT: | <i>Daily Telegraph</i> | NYT: | <i>New York Times</i> |
| DW: | <i>Die Welt</i> | NZZ: | <i>Neue Zürcher Zeitung</i> |
| E: | <i>Economist</i> | O: | <i>Observer</i> |
| EP: | <i>El Pais</i> | PBS: | <i>Public Broadcasting System News Hour (TV)</i> |
| FAZ: | <i>Frankfurter Allgemeine Zeitung</i> | RFERL: | <i>Radio Free Europe/Radio Liberty</i> |
| fF: | <i>freshFUEL</i> | R: | <i>Reuters</i> |
| FR: | <i>Foreign Report [UK]</i> | SCMP: | <i>South China Morning Post [Hongkong]</i> |
| FT: | <i>Financial Times</i> | SDZ: | <i>Süddeutsche Zeitung</i> |
| G: | <i>Guardian</i> | SF: | <i>SpentFUEL</i> |
| I: | <i>Independent</i> | SG-Sp: | <i>Secretary-General's Spokesman Daily Press Briefing</i> |
| If: | <i>Interfax News Agency [Moscow]</i> | SN: | <i>Salzburger Nachrichten</i> |
| IHT: | <i>International Herald Tribune</i> | StL: | <i>Standard [London]</i> |
| IT: | <i>Itar-TASS</i> | StV: | <i>Standard [Vienna]</i> |
| Izv: | <i>Izvestia</i> | ST: | <i>Sunday Times [London]</i> |
| JAI: | <i>JoongAng Ilbo</i> | UINB: | <i>Uranium Institute News Briefing</i> |
| JDW: | <i>Jane's Defence Weekly</i> | UPI: | <i>United Press International</i> |
| JFR: | <i>Jane's Foreign Report</i> | Ux: | <i>Ux Weekly</i> |
| JoC: | <i>Journal of Commerce</i> | VoA: | <i>Voice of America</i> |
| JP: | <i>Jerusalem Post</i> | WP: | <i>Washington Post</i> |
| KCNA: | <i>Korean Central News Agency [Pyongyang]</i> | WP/NWE: | <i>Washington Post National Weekly Edition</i> |
| KH: | <i>Korea Herald</i> | WT: | <i>Washington Times</i> |
| KT: | <i>Korea Times</i> | WSJ: | <i>Wall Street Journal</i> |
| KV: | <i>Kurier [Vienna]</i> | X: | <i>Xinhua News Agency [Beijing]</i> |
| LAT: | <i>Los Angeles Times</i> | Y: | <i>Yonhap [Seoul]</i> |
| Lib: | <i>Libération</i> | YOS: | <i>Yomiuri Shimbun</i> |

The Programme for Promoting Nuclear Non-Proliferation and the Newsbrief

The Newsbrief is part of the outreach effort which constitutes a major element of the Programme for Promoting Nuclear Non-Proliferation (PPNN). It is addressed to an audience interested in the subject of nuclear (non-)proliferation, to inform and help them alert their respective environments to the issue of nuclear non-proliferation.

The Newsbrief is published on behalf of PPNN by the Mountbatten Centre for International Studies, Department of Politics, University of Southampton. Communications relating to its content and other editorial matters should be addressed to Ben Sanders at 183 Route 63, PO Box 79, Falls Village, Connecticut, 06031-0079, USA (Tel. 1 (860)

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Web site: <http://www.soton.ac.uk/~ppnn/>

Production by Richard Guthrie. Printed by Autoprint.

ISSN 0965-1667