

# IDA RESEARCH SUMMARIES

IDA STUDIES & ANALYSES FFRDC

VOLUME 11, NUMBER 1, WINTER 2004

## *Enlarging NATO: Opening Options for Aspiring Members*

Over the past dozen years, NATO has expanded eastward. As early as 1995, it was evident that for this expansion to be achieved, there needed to be a common understanding of expectations for the potential new alliance members. The George C. Marshall Center in Germany, through its Conference Center division, asked IDA to join its outreach program, initially to address the common challenges facing countries dealing with NATO through the Partnership for Peace (PfP) program, and then focusing on those countries likely to join NATO in the near term.

IDA supports programs to engage the countries individually, and occasionally regionally, by helping them assess their current status, identify goals, and plan how to achieve those goals. The IDA team leads three- to five-day seminars conducted in the host country's language where facilitation replaces instruction; participants come from a cross-section of national life; and open dialog spawns honest and tough conclusions.

Recently, we reached a major milestone, with IDA staff members participating in the 100th seminar in this long and successful program.

### *The Challenge*

Romania was the first nation to join the PfP in 1994, and others soon followed. The nations seeking NATO membership brought with them a wide variety of histories, cultures, languages, national

goals, and security objectives. To create a venue for helping these countries work through the process of national development and reconstruction, the Marshall Center asked IDA to assist it in reaching out to the newly independent countries.

The Center wanted the program to focus on stability, rather than force enhancement, through preventive security, and to emphasize shaping the environment through enlightened leadership. Moreover, the Marshall Center sought a practitioner's approach to helping countries reform their national security structures and planning systems. The focus was to be process-oriented to support the individual country's needs, and be based on principles rather than replicating any country's existing system.

IDA's first efforts involved confidence-building, regional security, and arms reduction seminars for the Organization for Security and Cooperation in Europe. Over the past seven years, IDA has tailored subjects for bilateral seminars in individual countries that have included such topics as developing national security objectives and national security planning; crisis management; defense planning and budgeting; confidence-building and peacekeeping; and creating character, leadership, and identity in national security forces. The larger regional and multinational conferences dealt with broader topics such as regional confidence-building and peacekeeping, controlling corruption, and finding ways to build national security forces able to

deal with transnational criminal operations. The Partner nations request the subject and agenda.

Conference and seminar participants have come from a cross-section of the local government, and much of the work has emphasized inter-ministerial involvement. The range of participant experience has run from key decision makers to bright, young, up-and-coming staff assistants; often, members of the national assembly, deputy ministers, or prominent journalists have participated as well.

IDA's staff members have worked extensively not only with all 10 of the countries that have received membership bids over the past four years, but also with countries that may never aspire to full NATO membership but that desire specific assistance.

### ***Building a Methodology***

The IDA team conducts each conference or seminar as a collection of structured discussions of specific topics. The topics, developed and researched by the IDA facilitators, have covered progressively more complex subjects related to the

overall theme of the seminar. Initially, the participants meet in a plenary session where the methodology to be used is explained. Simultaneous translation is provided to the IDA facilitators so that they are aware of the discussions taking place among participants. Workshop facilitators and plenary session moderators are IDA staff members who have extensive knowledge of the topics covered by the conference. In the workshops, facilitators keep the discussions focused on the assigned issues and ensure that all members participate. Additionally, facilitators are available for conversations or discussions during breaks.

The conference workshops or working groups are conducted on a strict non-attribution basis, and all participants are made aware of this rule at the outset to encourage candid discussions. This protection and the consequent confidence in anonymity encourages most participants to openly and fully participate. However, facilitators frequently must take special pains to overcome some of the fears of some participants stemming from the oppressive practices of their prior governments.

Participants learn to understand the implications of expectations; to realistically appraise the political, economic, and social situation in their country; and to visualize some potential futures. During the final part of each workshop session, the participants develop conclusions or recommendations of the group that then become the subject of reports by a designated workshop representative to the plenary group. After the seminar, the participants take the products they developed back to their organizations or jobs. From there, many have introduced new concepts and ideas into their country's development process.

### ***Recent Accomplishments***

IDA worked in all three countries that joined NATO in 1999 (Poland, the Czech Republic, and Hungary), conducting 15 seminars in crisis management, defense planning and management, and national security strategy and military doctrine development.

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Romania and Bulgaria – two of the countries recently invited to join NATO – have benefited greatly from working with the Marshall Center and IDA. Beginning in 1997, the IDA team conducted a defense planning and management seminar in Bucharest, followed the next year by one on crisis management, response, and prevention. Four other events followed over the next four years, including a seminar on defense resource planning, programming, and budgeting; national security planning; and culminating in a character, identity, and leadership seminar late in 2002. In closing remarks at the November 2002 seminar, the representative of the Romanian Ministry of Defense noted that each time, at the conclusion of a seminar, key people who had participated remained at the site, working to prepare summaries, action agendas, and draft legislation. Romanian officials then took the products and the work done at the seminars and used them to create a national security strategy and other legislation that the country needed to pursue NATO accession. At the closing of the most recent seminar in Romania, the Ministry of Defense participant noted that the series of Marshall Center-IDA seminars was instrumental in his ministry’s ability to prepare for admission to NATO.

Romania’s neighbor, Bulgaria, requested similar assistance. Through the PfP support effort, the Marshall Center-IDA seminars created a context within which the Bulgarians could rewrite their national security strategy and review their national crisis management concept. In addition, a seminar was directed at the problems of designing a new defense resource management system. In 2002, the Bulgarian government hosted a multinational conference on institutionalizing

the prevention of corruption in security forces. Similarly, the IDA team has assisted Slovenia and Slovakia in reviewing and preparing their national security strategies for submission to their national legislatures, and has helped Macedonia prepare its law for a national crisis management concept and system. Recently, the Marshall Center-IDA partnership began the Danube regional crisis management group, an initiative that can be expanded and used as a model for other regions.

IDA has also been working in countries that hope to join NATO in the future. For example, the Marshall Center-IDA team has conducted seminars in Croatia. One dealt with issues of the military and the news media, while another worked through the problems of creating a national security strategy. Eighteen months later, at the most recent seminar, the Croatian team drafted a national security strategy, which it presented to the legislature and is now being implemented.



*A workgroup discusses “Force, Character, Identity, and Leadership” during a seminar in Romania. A similar seminar was presented to government officials in Croatia and Bulgaria.*

# Strengthening Defense Resource Management in Emerging Democracies

The breakup of the Soviet Union produced many new independent states, each seeking to strengthen its relationship with the West as a means to cement its own freedoms. The new and tenuous status of these countries had a major impact on U.S. national security strategy in the 1990s, and the United States sought ways to support these countries' ambitions by helping to strengthen their emerging democratic institutions. Establishing effective, democratic civilian oversight of military institutions was of special interest to the U.S. Department of Defense.

DoD asked IDA to develop both methods of helping newly emerging democracies reform their defense resource management practices and develop new analytical capabilities. Specifically, IDA was to work with the leadership of ministries of defense to promote transparency, strengthen democratic controls, and enhance interoperability with NATO's planning processes through reforms in defense resource management. This task meant that IDA would help:

- promote transparency in defense procedures concurrent with advancing civilian control of defense organizations;
- establish how information should flow between military and ministry of defense organizations and among the ministry, the government, and parliament;
- develop and implement practices that provide meaningful and timely oversight of defense resources, from planning through execution; and
- develop information, analytic skills, and administrative practices that are compatible with NATO's force planning process.

Key to achieving interoperability with NATO's planning systems was developing and institutionalizing a management system that

allowed each country to make realistic commitments to future NATO capabilities.

## The Environment

Helping these countries reform their defense management systems required IDA to draw on its knowledge of the basic principles of defense management in democratic states and on its understanding of the cultural and historical situation.

Perhaps the most important factor influencing IDA's work was that the countries needed to reform almost every aspect of their militaries at a time when their economies were struggling, there was relatively high unemployment, and government revenues were falling far short of the perceived needs of all sectors of government. Military forces needed to be reduced to levels that more realistically reflected then-current threats, and troops needed to be redeployed accordingly. Budget pressures frequently forced short conscription periods, provided for very little training, and resulted in poor living conditions for military personnel. Countries needed to address a wide range of readiness issues, modernize their equipment, and make major investments to repair their infrastructure. The demands for resources appeared to be unbounded.

While the shortfalls were clear, the path to solve these problems was not. Planning based on costs was foreign to Soviet-style military institutions. Countries were now working under a western-style economic system in which everything cost something, and resources were limited. Making decisions on what to do and in what sequence, based on economic constraints, was not widely understood or accepted. There were virtually no analytic or administrative practices to support the development of reform planning, and there were



no tools to formulate and evaluate alternative plans to provide insight into the now primary planning constraint: the availability of resources. Many different advocacy groups wanted resources to remedy their shortfalls, but there was no process for openly resolving the competition. Effective processes did not exist to permit civilian defense leadership to prioritize and coordinate the many competing uses of defense resources.

### **The Defense Resources Management Studies Projects**

IDA's early efforts focused on the analytic aspects of these problems. IDA developed a computer model that provides a methodology for systematically gathering information and developing cost estimates for budget requirements associated with the full spectrum of defense program characteristics. The software can be tailored to the administrative practices of each country's defense program so that the software matches the country's ways of doing business. For example, each country can:

- identify its major organization features, such as its services and agencies,
- categorize people as they internally manage personnel,
- identify the major equipment in use in the country, and
- establish the metrics they use to measure training.

In the financial portion of the model, each country represents its budget using the structure, numbering, and naming conventions it works with on a daily basis. When the tailoring is complete, the model is structured to match the administrative practices of that country.

Countries can then gather basic order-of-battle information, such as the unit hierarchy, manning, equipment, and training information. They also have the option to input information on war reserves, modernization, and infrastructure.



Figure 1. The Defense Resource Management Model.

Information is gathered at an organizational level the country chooses based on the types of decisions made in formulating future defense programs. This is typically at the battalion or battalion-equivalent level, although some high-interest, smaller units are included and some central support organizations are represented at higher levels of aggregation. Information on these units is gathered for the most recently completed year and entered into the software's database.

Concurrent with the effort to identify and gather basic force structure information, IDA analysts worked with the country's financial specialists. The goal was to determine the cost of each part of the total defense program and establish the underlying mechanisms that cause these costs to change as force characteristics are modified. The IDA and country analysts then structured the cost data to allow the country to estimate costs of virtually any alternative future defense program. In many ways, working together to define the relationships between force characteristics and budget requirements was the most important by-product of the bilateral study efforts. Whether the country continued to use the software after the study was complete was not nearly as important as the transfer of knowledge that took place in working through the study effort.

## Typical Annual Costs Of A Brigade

Equipment	Quantity	Training KMs	Training Rds
T-72	21	3,000	2,500
AGS-17	2	200	
BMP-1	23	3,200	800
BRDM-2	6	1,000	500
BRM-1K	3	300	75
BTR-80	1	250	125
D-30 (122 mm)	6		50
D-44 (85 mm)	6		40
M-120 mm	3		30
M-82 mm	6		60
Staff Vehicles	5	90,000	

Personnel	
Officers	220
NCOs	110
Sgts	285
Soldiers	1,215
	1,830

Operating Cost	
Personnel	3,100,000
Equipment Ops	800,000
Unit Ops	600,000
	4,500,000

*(excluding overhauls and capital replacement)*

Figure 2. Typical information available to decision makers after a DRMS project.

When the force and cost portions of the projects were complete, analysts developed and applied the skills required to develop multiyear defense programs within realistic financial constraints. Participants could see the cost of each component of the defense program, and they could use this information to make difficult tradeoffs between capabilities and their associated costs.

### Improving the Flow of Information

The approach to defense management that IDA introduced was based on principles that were so different from past practices that participating countries often had difficulty sustaining the initial progress. None of the countries had previously attempted to assemble an integrated set of information on its total defense program or had developed methods to link these data to budgets. In some cases, even the most fundamental information was hard to obtain or existed in multiple, inconsistent forms. At times, one part of the defense establishment was unwilling to share its information with others. At other times, two different organizations would have information on the same aspect of defense, but it was different in detail and in aggregate totals. A typical problem was obtaining reliable unit-manning data. Often, a general staff organization would have one set of figures, a human resources office in the ministry another, and the budget office yet a third. Resolution of these inconsistencies often had benefits to the ministry's internal

management that were not intended or anticipated.

Gathering basic defense information into a common and integrated database required overcoming other, deeply rooted problems. It was common in Soviet-influenced militaries to keep information segregated. Information, literally, was power, and sharing data throughout the defense establishment was done unwillingly. Sometimes, it was necessary to have the minister of defense sign an official order to get one organization to share data. This was, however, an

important element in achieving two of the DoD objectives for IDA's work: promoting transparency between the uniformed military and the civilian defense management officials, and promoting effective democratic control over defense. Without accurate and timely defense program information, the ministry staff was unable to effectively oversee the military or shape the future defense program.

The Defense Resources Management Studies (DRMS) showed new ministry defense staffs the types of information essential for managing defense resources and provided a systematic and integrated way to collect the information. Providing an authoritative defense-wide database (similar to the DoD's Future Years Defense Program) was essential for the emerging, democratically controlled defense ministries, and a step promoted and accomplished in many countries under the DRMS.

The DRMS projects helped illustrate how multiyear defense program planning could be done within realistic funding constraints. As countries were exposed to the DRMS concepts, planning became more disciplined and commitments to NATO more realistic.

### Expanded DRMS Projects

Under the Soviet system, defense management was largely a self-contained function of the defense industrial establishment, using primarily communist party organizations and personnel for

real decisions. Creation of ministries of defense under responsible leadership appointed by democratically elected governments was a major change. Management systems were created quickly and frequently revised with the election of each new government.

Many of these countries sent military and defense civilians to U.S. schools, such as the Defense Resource Management Institute in Monterey, California, where they were exposed to U.S. Planning, Programming, and Budgeting System concepts. They also studied defense management systems in other NATO countries. Several countries decided they wanted to emulate many of these concepts, but they were having significant difficulties developing and implementing new management systems.

IDA expanded the DRMS efforts by developing a number of one-week workshops to explain the basic concepts associated with developing, refining, and implementing various aspects of defense management systems. These workshops created a working environment where key individuals from the host country could develop system designs tailored to their local needs and organization cultures. IDA organized and conducted the workshops, facilitating discussions and helping the groups only when they needed to reconcile different views. Each workshop resulted in a plan that the group had developed itself. These workshops were conducted in almost every

country of the former Soviet Union, as well as in a number of South American and Pacific Rim countries.

In some instances, especially in the larger countries, implementation of reformed management systems proved more difficult than expected. IDA was asked to help several countries flesh out their system designs and implementation processes. These projects typically were done through monthly visits over two or three years. IDA analysts worked closely with host nation Defense Ministry staffs as they developed key management documents, such as their versions of ministerial guidance and program preparation instructions. In each case, IDA clarified objectives of the individual components of these systems and offered alternative approaches, but always required the local management teams to develop their content. IDA's style of mentoring has won considerable praise from senior leaders who have sent letters of commendation to the highest levels of DoD.

### **Defense Resource Management Assessments**

When NATO started planning for the second round of enlargement, there was considerable interest in ensuring that each new member was ready to participate in the Alliance. OSD asked IDA to assess the defense management systems of each country that sought NATO membership at

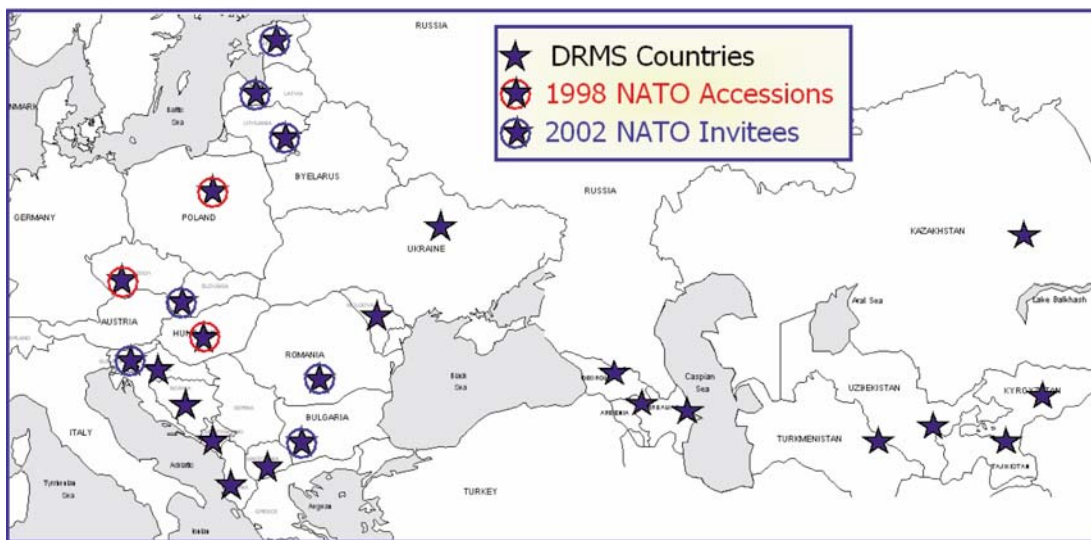


Figure 3. DRMS participants.



the 2002 Prague Summit. Starting in 2000, IDA teams reviewed the defense resource management systems of seven countries that were later invited to join the Alliance. These in-depth reviews covered the full spectrum of national defense management starting with a review of national security policy documents and defense relationships with other government agencies. The Defense Resource Management Assessments reviewed the resource management systems internal to the ministries, including audit of budget execution and management information systems. The underlying question in these studies was whether the defense management systems had the essential components needed to produce planning information that NATO could rely on for its own internal processes. In each of the seven

countries where the study was done, IDA reported that the country was on the way to implementing an adequate process and offered a number of recommendations that IDA believed would expedite or strengthen the process.

Through hard work, many new democracies in the former Soviet Union, Warsaw Pact, and former Yugoslavia have made significant progress toward creating governments and economies compatible with western institutions. Three of these countries have already joined NATO and seven more have been invited. IDA researchers have played a part both in helping defense management reform in these nations and in contributing to U.S. national security objectives in the emerging democracies.

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## *Crisis Management Engagement Activities in Southeastern Europe*

**I**n January 1994, the Department of Defense expanded engagement with partners of the North Atlantic Cooperation Council through the Partnership for Peace program. One small but important element of the engagement program was the use of civil-military emergency planning (CMEP) initiatives to enhance the capabilities of the participating countries to work with each other, with neighboring nations, and with the international community to prepare for cooperative responses to natural and technological disasters.

Civil defense organizations of the Partner nations at the time were evolving from primarily military structures, whose missions were related to wartime emergency conditions, into “civil protection” structures that could respond to all forms of disasters and emergencies. The U.S. Defense Department worked with Partner nations to help familiarize their professional civilian and military “emergency managers” with the constitutional and legal basis, and planning and operational procedures, that govern the use of U.S. armed forces to support civil authorities.

### *Creating a Coordinated Response*

DoD helped officials from Partner nations work with evolving computer-based techniques for emergency planning and managing emergency information and taught them how to employ international standards and modern technology for CMEP. This included providing basic computer support capabilities and using tabletop exercises that enabled the civil protection structures of neighboring nations to begin coordinating their plans and to communicate with each other for disaster preparedness and response.

Also as part of the CMEP initiatives, DoD asked IDA to help with a series of workshops in the United States and in Partner nations at which Partner countries discussed how to best facilitate cooperation among neighboring nations. IDA’s role was to facilitate discussion, advise participants, and document the proceedings. Beginning in September 1999, IDA assisted the Bulgarian Civil Defense organization when it hosted a workshop for 25 Partner nations, NATO staff, and other international organizations.



Citing the difficulties experienced by neighboring nations attempting to assist the government of Turkey during its earthquake earlier that month, the Bulgarian Civil Defense Organization recommended forming a regional CMEP council to facilitate cooperation among the neighboring nations and to develop standard procedures and interoperable capabilities for disaster response within the region. In February 2000, DoD arranged through the National Guard Affiliation Program a working session in Denver, Colorado, to draft an agreement to form such an organization. IDA prepared an initial working draft and facilitated the discussions that led to a consensus version that was subsequently vetted in the national capitals. The agreement has been signed by five nations, ratified by three parliaments, and awaits signatures in other nations.

IDA further assisted the nations with meeting the objectives of the council by forming four working groups to discuss information management, information technology, planning and exercises, and standards and procedures. With IDA serving as a mentor during a series of planning conferences and workshops held in Albania, Croatia, Macedonia, and Romania, the groups were able to develop standardized and shared national databases; develop agreed requirements for the regional emergency information network; coordinate national exercises with those of NATO and the United Nations, and identify minimum training standards for the regional civil protection responders; and develop a draft standing operating procedure for the region.

### ***Integration through Simulation***

During the workshop process, the southeastern Europe defense ministers noted the large number of regional initiatives that were under way and decided in November 2000 to conduct a biennial series of Southeastern Europe Simulation (SEESIM) exercises to integrate these efforts. The first event (SEESIM-02) was hosted by Greece in December 2002 and used as its simulated emergency condition a series of earthquakes in the region. The distributed format allowed the civil and military emergency planners to participate from their normal headquarters

while a control group in Athens managed the exercise. The exercise operated as a testbed for much of the work accomplished by the CMEP working groups. IDA was the civil protection advisor to the Greek admiral who directed the exercise, and assisted selected nations during the exercise. Planning has started for SEESIM-04, which will simulate a series of terrorist incidents in the region, and IDA will continue to support Joint Forces Command with the exercise planning and control.

In July 2003, IDA facilitated a workshop hosted by the Czech Republic's Fire and Rescue Service for 19 former and current Partnership for Peace nations. There, representatives discussed their experiences with adapting different national models for placing their military and civil defense assets under civilian control. During breakout working group sessions, participants identified and set priorities among the lessons learned from the various national models. IDA is documenting the results, which will be distributed by DoD to the participating nations, other interested nations, and intergovernmental and international organizations.

### ***Applying Lessons Learned to Iraq***

DoD intends to use lessons learned from the July workshop to lay the foundation for a "coalition of the willing" to assist the Office of Reconstruction and Humanitarian Assistance with developing an effective civil protection capacity in Iraq (i.e., to reduce the potential threat to the population from natural or man-made disasters and provide the civilian population with responsive emergency services). Based on the results of the workshop and assessments of the Iraqi needs and coalition partners' capabilities, IDA will develop a draft multinational plan to enhance the military and civil defense capabilities of the emerging Iraqi government. This plan will include national and regional assessments by coalition experts and appropriate seminars, workshops, and on- and off-site training by coalition members. If the Office of Reconstruction and Humanitarian Assistance approves the plan, it should provide a roadmap leading to a robust Iraqi capability and serve as a model for other post-conflict situations.

# *Militarily Critical Technologies Program*

**F**or many years the United States restricted the dissemination of certain technologies deemed critical for military operations.

Inhibiting the proliferation of these critical technologies is the essence of the Militarily Critical Technologies Program. The program's primary product, the Militarily Critical Technologies List (MCTL), instituted under the Export Administration Act of 1979, is a detailed, structured compendium of the technologies the Department of Defense assesses as critical to maintaining superior U.S. military capabilities.

While the responsibility for technology security has been historically divided between the Department of State and the Department of Commerce, the Department of Defense has played a critical supporting role to both. IDA has been assisting DoD with the MCTL since the list's inception – vetting technologies nominated to be included on the list and developing the methodologies needed to accurately describe each technology. From the beginning, the list established a consistently factual technical basis for adding and removing items from international export control regimes and from U.S. unilateral controls. The list is now widely distributed and accessed electronically through a website maintained by the Defense Technical Information Center.

## *List Evolved over Time*

Through the lifetime of the MCT Program, many changes have occurred in technologies, publication processes, international conditions, and governmental processes. During the Cold War, organizations such as the Coordinating Committee on Multilateral Control (COCOM) helped frustrate the Communist nations' efforts to acquire western technologies. After the fall of the Soviet Union, COCOM was replaced by the Wassenaar Arrangement.

Simultaneously, the technology focus changed. When the Wassenaar Arrangement was first established, the focus was on the most developed, capable, and often the most expensive technologies, such as five-axis machine tools and high-end supercomputers. Currently, however, with the war on terrorism, the concern has shifted dramatically to more conventional technologies that are commonplace and that can be easily adapted for destructive purposes. Also, the export control community retains its focus on identifying and, when feasible, regulating technologies that can be used for weapons of mass destruction.

One regulatory challenge with the Wassenaar Arrangement is that consensus is required before the international body can act. Enforcement depends on national means and energies of member countries. Meanwhile, several other international regimes, such as the Australia Group and the Nuclear Suppliers Group, maintain long-term commitments to monitor and constrain illicit trade of particular technologies and commodities.

The changing nature of the international business environment complicates efforts to control access to technologies, and U.S. corporations have increased offshore manufacturing of products that incorporate technologies the U.S. military has deemed critical, including some computer source codes. At the same time, the U.S. government finds it more difficult to add restrictions that could impede the viability of U.S. businesses. Overall, it has become increasingly difficult to maintain effective international constraints to help protect critical military technologies.

Some of the technologies included in the MCTL, such as information systems and biological technologies, have expanded dramatically in the last five years. Because most of this growth is driven by commercial applications and has

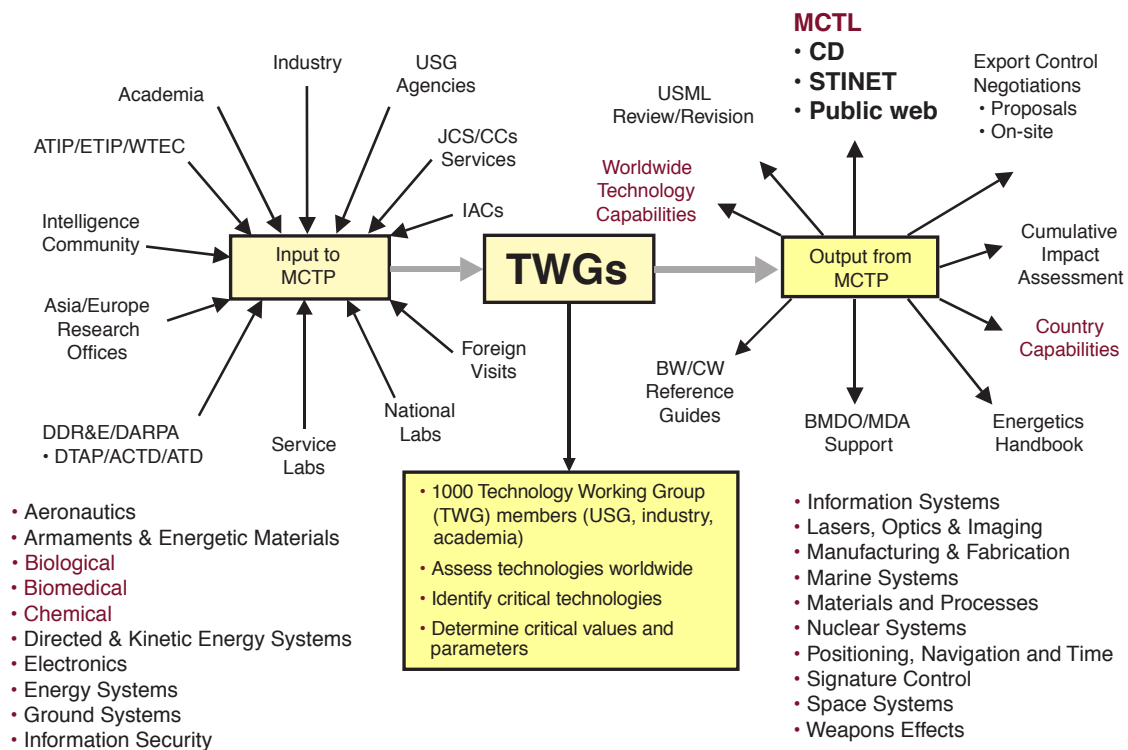


Figure 4. The MCTP process is key to the program.

occurred in the private sector, the number of items that are truly militarily critical and subject to practical regulation by export controls is limited. Also, information warfare concepts in DoD have embraced a new suite of disciplines. Telecommunications and computers are increasingly vital and evolving rapidly. Other technologies, such as those for chemical or nuclear weapons, have evolved at a more measured pace.

### Technology Working Groups

IDA brings together technical experts from industry, government, and academia to vet nominated technologies and develop the rationale and parametric values needed to accurately describe each technology. To solicit input, IDA organizes and leads 20 Technology Working Groups (TWGs). Collectively, the groups are made up of 1,000 to 1,400 nationally recognized experts who present their independent views and concerns for each technology nominated to be critical. IDA analysts who chair the TWGs are themselves technical experts. Chairpersons are also well-versed in the processes used to consider

technologies within the Departments of State, Commerce, and Defense and in international bodies.

Key to the process is the record keeping required of IDA chairpersons. Each tracks decisions in building the MCTL and in providing the technical inputs to both U.S. and international deliberating bodies responsible for administering the laws and procedures of the member governments.

IDA also assesses the state of developing technologies of interest and of competing technologies worldwide. IDA gathers data from international partners from a wide range of classified and unclassified sources, and from selected visits to foreign countries. Such visits promote understanding of international export control matters and provide our analysts with access to research and production activities in the private sector. IDA has been asked to give seminars in other countries on both technology security processes and on the progress being made in technology areas of highest interest.

## Expertise Used in a Variety of Ways

In addition to providing data used to add items to the MCTL, IDA has led the technical evaluation process for reducing the number of items falling within the regulations of export control systems. When President George H. W. Bush requested that the number of restricted items be reduced by 40 percent, IDA designed an assessment system that compared the military importance of widely disparate technologies and selected only the most sensitive – such as certain stealth capabilities – to remain on the list of protected technologies.

IDA's work also has helped ease export controls on many computer hardware and software items and technologies. Our analysts track the significance of commercial progress in these areas, acknowledge the diffusion of information technologies, and develop metrics for determining acceptable national and international computational performance levels.

Beginning in 1997, IDA has worked with the Defense Technical Information Center to provide a

version of the MCTL on the Internet. This has allowed IDA to update the list, receive feedback, and solicit new ideas through a dedicated website. Placing the list online also has dramatically reduced the costs of distributing the information and allows managers to selectively update the most important information and findings without republishing a print version of the book.

The MCT Program has evolved since the Cold War and now contributes in other ways. For example, MCTL experts and their documents are used in crafting international capability assessments and determining possibilities for engagement in international cooperation.

IDA continues to provide a refined and vetted list of technologies critical to U.S. national security. Our analysts strike a balance between the economic costs of technology protection and the benefits of enhanced security. Over the years, IDA has become an increasingly important part of the corporate memory and continuity in technology understanding in support of U.S. government interests.

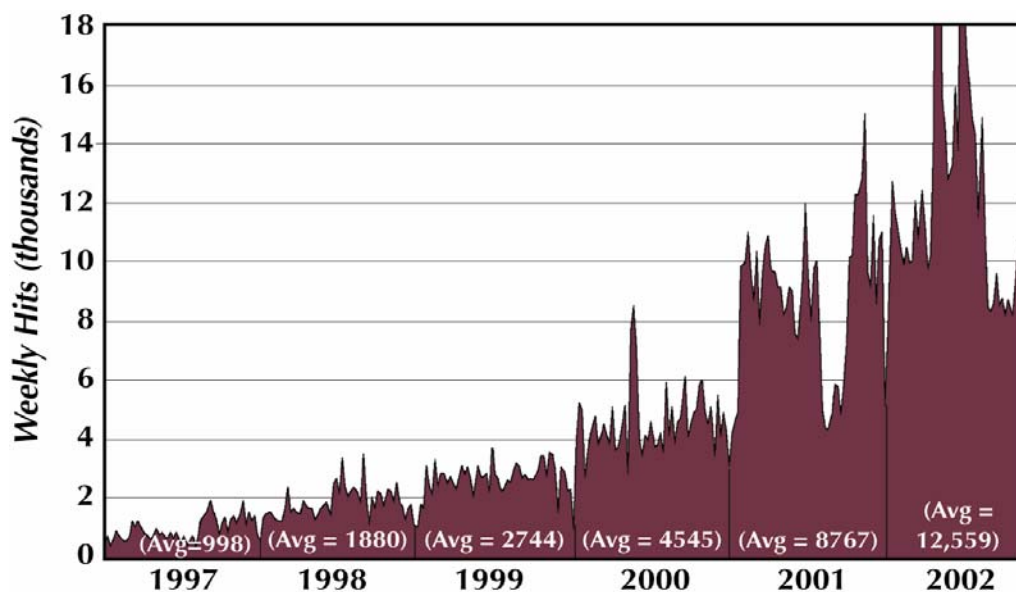


Figure 5. IDA worked with DoD to place the Militarily Critical Technologies List online. As the product has been improved over the years, weekly usage has dramatically increased from about 1,000 hits per week in 1997 to about 12,000 hits per week in 2002.



# Regional Implications of U.S. Policy Options for North Korea

In October 2002, North Korea acknowledged that it had begun to produce enriched weapons-grade uranium in clear violation of the 1994 agreement with the United States to cease such production. Soon thereafter, North Korea withdrew from the Nuclear Non-Proliferation Treaty and restarted its 5-megawatt (MW) reactor, which could produce material for a half-dozen plutonium weapons in six months to a year. If North Korea were to resume construction of its 50 MW and 200 MW plants, it potentially could produce material for 50 nuclear weapons a year, and the uranium enrichment program could add another 30 weapons' worth of fissile material.

Enforcing nuclear nonproliferation norms on North Korea is a multilateral mission, whether the enforcement involves negotiation, sanctions, or the use of force. While all of North Korea's neighbors join the United States in strongly opposing a North Korean nuclear weapons program, there is considerable disagreement on how to end the program. It has fallen to the United States to take the lead in stopping North Korea's nuclear proliferation, because no other state has both the level of concern and the required resources to deal with the problem. For its part, North Korea's Kim Jong-il regime insists that the nuclear issue exclusively concerns Pyongyang and Washington, and that its country is entitled to a "strong deterrent" to ward off the hostility of a much stronger nuclear state.

The United States has four generic policy options for dealing with North Korea: engagement, containment, economic sanctions, and preemptive attack. Because the cooperation of Northeast Asian states will be needed to contain North Korea's nuclear ambitions, and because the consequences of any action taken against North Korea will spread throughout the region, American policy formulation must take into account the policies and interests of North Korea's neighbors. The Defense Threat Reduction Agency asked IDA to assess the attitudes in these neighboring states toward the four options that

the United States can exercise to stop North Korea's nuclear proliferation.

## Approach

Understanding the policies and interests of North Korea's neighbors is difficult. Every state and society has a variety of interests – often conflicting – on important issues, and governments rarely spell out their policies in detail. In more closed societies, such as China and Russia, public opinion is more difficult to assess than it is in more open democratic societies. Even in democracies, the high cost of assessing public opinion often forces researchers to rely primarily on reports and polls that have already been conducted.

IDA assessed public as well as official opinions and interests in China, Russia, Japan, and South Korea through news media reports gathered by the Foreign Broadcast Information Service in the northeast Asian countries, and by personal contacts with foreign visitors to the United States.

## China

China's concern over North Korean nuclear weapons and missiles is low compared to the concern shown by South Korea, Japan, and the United States, because China judges it unlikely North Korea would use such weapons against it. Of greater concern is that a North Korean nuclear weapons capability might induce Japan, South Korea, or even Taiwan to acquire the same. Perhaps of greatest concern to China is that North Korean nuclear weapons might provoke a preemptive American attack on North Korea, triggering a war that would bring more U.S. troops into Asia, and send fleeing North Koreans into China.

Officially, the Chinese government deplores equally North Korea's withdrawal from the Non-Proliferation Treaty and U.S. pressure on the North Koreans. As a partial solution to the



Figure 6. North Korean leader Kim Jong-il.

standoff, China suggests that the United States offer the Kim Jong-il government firm assurances that no attempt will be made to destabilize or replace that government. Off the record, working-level Chinese officials and people outside the government have expressed their impatience and displeasure with the North Koreans. But little as they like the North Koreans or their nuclear ambitions, the Chinese do not approve of the U.S. options of containment or military pressure, although it is difficult to imagine that they would take any military action on behalf of North Korea if it were targeted by surgical strikes. If the United States were to impose economic sanctions on North Korea, either bilaterally or through the U.N. Security Council, articles in the official Chinese press hint that the sanctions might be largely supported if serious diplomatic efforts to end North Korea's nuclear program had failed.

## Russia

Although Russia desires to play a role in resolving the North Korean nuclear crisis, it is not because they feel threatened by the North's nuclear program. However, like China, Russia is concerned that a preemptive U.S. attack on North Korea would increase U.S. influence in northeast Asia and send North Korean refugees across the border into Russia. Russia has a strong economic interest in achieving peace and stability on the Korean peninsula. The Asian part of Russia is rich in natural resources that could be developed with the assistance of South Korea and Japan.

If the United States continues its current policy toward North Korea, Russia is likely to continue

its diplomatic overtures toward that country, hoping that South Korea will lose patience with the Bush administration and seek to more actively engage North Korea by providing economic funding for Russian-built projects in North Korea. The Russians have repeatedly proposed that the United States engage in multilateral dialogue with North Korea and offer a security assurance. A U.S.-led sanction regime against North Korea probably would not find much support in Russia, which has few trade relations with North Korea. Nor would Russia support a U.S. preemptive attack on North Korea, although it, too, is unlikely to offer North Korea any military assistance.

## Japan

Japan's fear of North Korean nuclear weapons and missiles is palpable. *Nodong* missiles have the necessary range (but unknown accuracy) to hit almost any spot on the main island of Honshu (Figure 7). Japanese concern about the North Korean missile threat dramatically increased when it launched an intercontinental-range *Taepodong* rocket that overflowed Japan and splashed into the Pacific in August 1998. Pending the development of a more effective missile defense system, the Japanese have only U.S.-made PAC-2 missiles to defend themselves. Japan is also vulnerable to North Korean sea-borne commando raids. Like the Chinese and Russians, the Japanese are also concerned about a possible flow of North Korean refugees into Japan.

To judge by their public threats, the North Koreans could have any number of reasons to attack Japan. Japanese and Koreans have had poor relations for hundreds of years, and North Koreans (as well as South Koreans) still harbor bitter memories of Japan as a harsh colonial power in the first half of the 20th century. In addition, Japan hosts thousands of American troops, which could be targets of North Korean attacks in the event of a second Korean war.

Japan's level of concern over North Korea's nuclear and missile programs has risen, but mainstream public opinion has begun to consider the desirability of increasing Japan's military strength. Although it relies on the U.S.-Japan security alliance as the main deterrent to foreign aggression, Japan launched its first two

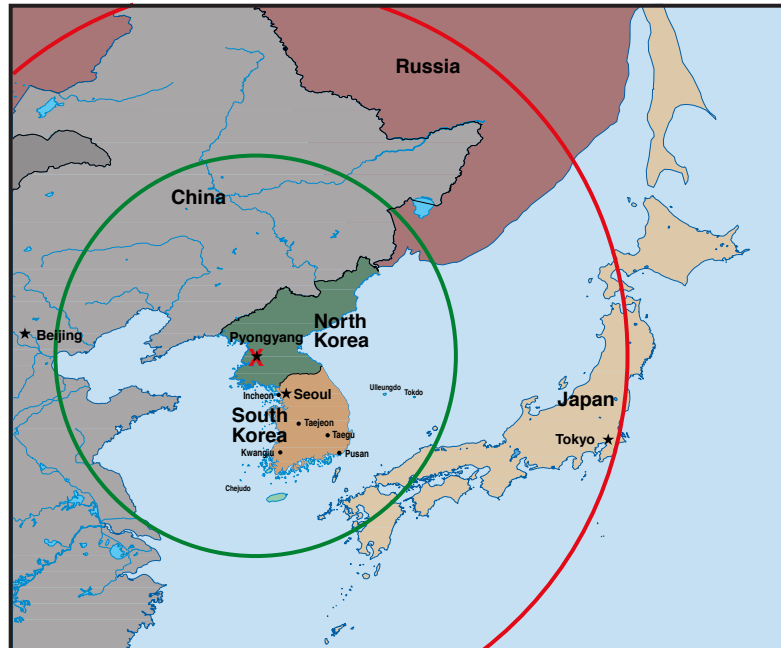
surveillance satellites in March 2003 to reduce dependence on U.S. surveillance of North Korea. Japan is seriously considering participating more actively in a missile defense system with the United States. Although the official Japanese government position is that the country would not develop nuclear weapons even if North Korea declared itself to be a nuclear power, ultraconservatives have occasionally mentioned a Japanese nuclear option.

As the United States continues its current policy, the Japanese are likely to continue to make their own half-hearted attempts to establish dialogue with North Korea. However, with so many issues separating the two countries, it is hard to be optimistic about reconciliation in the foreseeable future. If the United States chooses economic sanctions, the Japanese may join in, especially if sanctions are supported by the U.N. Security Council. Given Japan's "peace constitution," the strong pacifist mood of the Japanese people, and the vulnerability of Japan to North Korean attack, it is unlikely that Japan would support a U.S. attack on North Korea or permit U.S. bases in Japan to be used in such an attack.

## South Korea

Most South Koreans express little fear of North Korean nuclear weapons and missiles, which is surprising considering the proximity of North Korea and the frequency and magnitude of its threats against South Korea. There is a noticeable divide in public opinion between the older generations, who recall the Korean War and consequently fear North Korea, and the post-war generations. The administration of Roh Moo-hyun, who took office in February 2003, is the first to be dominated by the younger generation.

Of the many North Korean threats to which the South Koreans have been subjected over the years, North Korea's nuclear weapons, delivered by



**Scud missile range to 700 km (600-800 inventory)**  
**Nodong missile range to 1,300 km (175-200 inventory)**  
**Taepodong I missile range to 2,500 km (one test fired, no inventory)**

Figure 7. Ranges of North Korean nuclear missiles.

missiles, planes, or surface transport, are the most apocalyptic. Yet, most South Koreans believe the North Koreans would not unleash weapons of mass destruction against their fellow Koreans, but would instead target Japan or the United States. A more mundane threat against South Korea is a resurgence of the commando attacks that have periodically harassed South Korea over the last 50 years.

Paradoxically, the most likely threat to South Korea is a collapse of North Korea that might send millions of refugees into South Korea. The South also fears having to pay for the reconstruction of North Korea, estimated to cost between \$50 billion and \$4 trillion over a 10-year period. Rather than provoking either a North Korean attack or a collapse, many South Koreans prefer the status quo, even if it means living with a North Korea that has nuclear weapons.

The current South Korean government of Roh Moo-hyun, and its predecessor under Kim Dae-jung, has repeatedly urged the United States to moderate its approach toward North Korea. In the meantime, South Korean dialogue, aid, and commercial

interaction with North Korea continue sporadically, at a pace set by the North Korean regime. An international economic embargo against North Korea would be unpopular in South Korea, although its government might cooperate to the extent of reducing its aid donations to the North. For virtually all South Koreans, a U.S. attack on North Korea is unthinkable, and it is highly unlikely that the South Korean government would permit the United States to launch such an attack from U.S. bases in South Korea. If such an attack were launched from offshore, it would seriously jeopardize, if not totally destroy, the 50-year-old U.S.-South Korea security alliance.

The positions of North Korea's neighbors in regard to the North Korean threat and U.S. policy options are summarized in Tables 1 and 2, which reflect the situation as of Summer 2003. As one

would expect, risk (likelihood) and damage are reflected as fear, except in the case of many South Koreans, who believe they have immunity from North Korean attack. U.S. engagement is favored by all. Containment (the status quo) is accepted and might continue to be accepted even if North Korea disturbs that status quo by developing nuclear weapons. At this time, no one favors employing economic sanctions or military force.

For any U.S. administration, engaging North Korea and offering a security guarantee to the Kim Jong-il government is politically hazardous and morally repugnant; nor is this option likely to permanently or completely eliminate North Korea's nuclear weapons program. But this option seems to be the first choice of North Korea's neighbors, whose cooperation is needed to ensure that any U.S. policy choice succeeds.

Table 1. Regional Threat Perceptions

	China	Russia	Japan	South Korea
<b>Risk<sup>1</sup></b>	Low	Very low	High	High
<b>Damage<sup>2</sup></b>	Low	Very Low	High	High
<b>Fear<sup>3</sup></b>	Low	Very Low	High	High

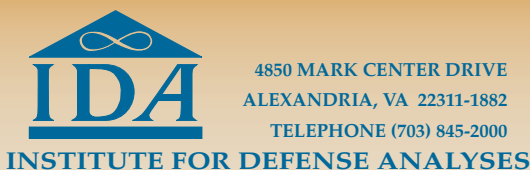
<sup>1</sup> Perceived likelihood of being attacked by North Korea, if provoked.

<sup>2</sup> Physical, social, and political cost of being attacked by North Korea.

<sup>3</sup> Expressed fear of North Korean attack (threat perception).

Table 2. Regional Attitudes toward U.S. North Korean Policy Options

	China	Russia	Japan	South Korea
<b>Engagement</b>	Favor	Favor	Favor	Favor
<b>Containment</b>	Accept	Accept	Favor	Accept
<b>Economic Sanctions</b>	Oppose	Oppose	Accept	Oppose
<b>Preemptive Attack</b>	Strongly Oppose	Oppose	Oppose	Strongly Oppose



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