AIR WAR COLLEGE
AIR UNIVERSITY

PROLIFERATION OF WEAPONS OF MASS DESTRUCTION AND INTERNATIONAL INSECURITY

- NATO's APPROACH TO A NEW THREAT -

by

Karl-Heinz Börner
Lieutenant Colonel, German Air Force

A REPORT SUBMITTED TO THE FACULTY

IN FULFILLMENT OF THE CURRICULUM REQUIREMENT

Advisor: Dr William Martel

MAXWELL AIR FORCE BASE, ALABAMA

April 1995

TABLE OF CONTENTS

DISCLAIMER ii

ABSTRACT iii

BIOGRAPHICAL SKETCH iv

Chapter

I. INTRODUCTION 1

II. FRAMEWORK FOR DEVELOPING NATO'S NON-PROLIFERATION STRATEGY 3

Recognition of a Threat 5

Definition of NATO's Objective 7

Analysis of the Threat 9

Assessment 14

Is There a Promising Approach? 16

Analysis of Resources 17

Assessing of NATO's Resources 23

Devise a Strategy 26

III. CONCLUSION/RECOMMENDATIONS 27

NOTES 31

DISCLAIMER

This study represents the view of the author and does not necessarily reflect the official opinion of the Air War College or the Department of the Air Force. In accordance with Air force Regulation 110-8, it is not copyrighted, but is the property of the United States government.

Loan copies of this document may be obtained through the interlibrary loan desk of the Air University Library, Maxwell Air Force Base, Alabama 36112-5564 (telephone [334] 953-7223 or DSN 493-7223).

ABSTRACT

TITLE: Proliferation of Weapons of Mass Destruction and International Security: NATO's Approach to a New Threat

AUTHOR: Karl-Heinz Börner, Lieutenant Colonel, German Air Force

In present discussions on international security the issue of "Proliferation of Weapons of Mass Destruction (WMD)" plays an important role. The problem itself is not a new one. However, the problem is of increasing importance due to various traditional and current risks. To clearly define and control these risks is getting more complicated since the clear cut international structures of the "Cold War" era no longer exist.

NATO addressed the problem in the "Alliance New Strategic Concept" in 1991 as a challenge and a risk to international security without defining the particular competence of NATO in this field. However, the Alliance obliged itself to continue and strengthen cooperative efforts to prevent or reverse proliferation. For this purpose in 1994 NATO established working groups to examine the implications of proliferation for the defense planning and capabilities of NATO and its members and to consider what measures can be taken in the defense field. The working groups are tasked to accomplish their mission by summer of 1996.

BIOGRAPHICAL SKETCH

Lieutenant Colonel Karl-Heinz Börner has been interested in the risks of the spread of weapons of mass destruction since he was an air defense officer and Unit Commander of a nuclear capable Surface to Air Missile (SAM) unit in 1983-1988. From 1991-1992 he served in NATO as a SAM Staff Officer with headquarters 4th Allied Tactical Air Force (4ATAF) in Heidelberg, Germany.

Lieutenant Colonel Börner is a graduate of the Air War College, class of 1995.

I. INTRODUCTION

The "Cold War," an intense conflict between the nations of the Warsaw Pact (WP) and those of the North Atlantic Treaty Organization (NATO), was defined on both sides in ideological terms as a clash of irreconcilable political, economic, and social systems. The "Cold War" was a struggle fought on each side by any means short of a direct military confrontation between the two superpowers, USSR and United States of America. Objectives and threats were clearly defined on both sides. The effort it required to reach the objective was determined by strategy, the linkage between objective, threat, and available resources.

Therefore, nations built alliances, created military structures, developed weapon systems, devised plans and concepts. Finally the superior strategy complemented an eventual demand for freedom among people in the Warsaw Pact nations. A war was waged and won, and NATO's goal was achieved. The Soviet Union and the Warsaw Pact were broken apart.

This historic milestone, without any doubt, changed our world entirely. The questions must be asked: "Is this the world that was foreseen by the "Cold War's" strategy and decision makers?" Did the determination of the Alliance' objective include an end-state and ways and means to maintain it? Most likely the second question was not asked or a definite answer was not found.

More than five years after the Berlin wall came down the world is still in transition. It is ruled by dynamism, uncertainty, and instability, but the period of transition is not over yet. Still we are not sure where to go, how to determine definite objectives, and how the world should look when these objectives have been accomplished.

Positive and negative factors in today's world seem to eliminate each other. First, the achievement of NATO's prime objective, the collapse of the Soviet Union on one hand, led to fragmentation, ethnic strife, and virulent nationalism on the other. Second, international cooperation and humanitarian efforts on one hand are challenged by Third World instability and international terrorism. Third, the immediate but stable and controlled nuclear confrontation of the "Cold War"--era has given way to the proliferation of weapons of mass destruction (WMD) and means for their delivery.

With this background in mind, this paper examines the role and responsibility of NATO in the current security environment. The paper will be limited, however, to cover primarily the issue of the proliferation of nuclear weapons as it relates to NATO's capabilities and limitations. It will further describe the activities which NATO has taken to date and point out the importance of the interaction of politics and military factors in NATO's emerging mission.

The premise of this paper is that the threat posed by the proliferation of WMD is so serious that it must guide strategy. The threat is extremely important despite the fact that 80-90 percent of the nations capable of having nuclear weapons today have--so far--elected not to have them. The main reasons for rejecting possession are:

- Weak perceptions of a threat--because one lives in a benign neighborhood or one has confidence in a collective security system.
- The absence of coercive designs on other nations.
- Domestic opposition within democracies on prudential or moral grounds.
- Perceived hostile reactions from other nations.
- Membership in a political structure (e.g. the Soviet empire) that effectively prohibits it.
- The fear of internal instability and therefore uncertainty about who may gain control over these weapons (e.g. the apparent decision of South Africa not to proceed with its weapons program)[1]

II. FRAMEWORK FOR DEVELOPING NATO s NON-PROLIFERATION STRATEGY

In general, strategy is the art of employing those elements of a nation's resources that are needed to accomplish the nation's national objectives. This theory can as well be claimed by any coalition of nations or an alliance. In any case the core element of a strategy is the precise determination of the nation's or alliance' objective considering both vital interests and perceived threats. In principle, this determination can be driven by either one of two basic prerequisites.

First, the nation's intent to accomplish its objectives is based solely on its' national interest. This *nation-initiated strategy* can be called "active" or "offensive", comprising a combination of economic, political, cultural, social, moral, and psychological elements. Since offensive strategy in most cases has the advantage of deciding when to act, it lies within the power of the nation to determine when and to what extent the strategy will unfold.

Second, the nation's intent to accomplish its objectives is coerced or influenced by an external threat. This *threat-initiated strategy* can be called "defensive" or "responsive". However, the question of time can be of crucial importance, since the need to implement the strategy is dictated by the development and intensity of the perceived threat. Consequently, it is of utmost importance to recognize and to analyze a threat as early as possible, determine one's own objectives, and assess and update the situation as precisely as possible. (See figure 1, steps 1-4).

At this state the question " Can the threat most probably be countered ?" should be answered, even before proceeding to a detailed analysis and assessment of one's own

resources. (Step 5) The answer, either Yes or No, provides three opportunities for the further development of the strategy: (Step 6)

If the answer is No, because the objective cannot be accomplished due to insufficient the resources or capabilities, or any other reasons, e.g. moral reservations, then the objective can either be dropped entirely or the objective can be modified to achieve success. To drop the objective means to stop the process of strategy making, which in turn leads to the acceptance of status quo, and thus not to encounter threat. To modify the objective in favor of succeeding, as a rule, means to deviate from the original intention. It still leaves the opportunity to counter the perceived threat according to the changed objective.

If the answer is yes, then the third opportunity as a result of the threat analysis, requires detailed analysis and assessment of one's resources to achieve the determined objective and deal with the identified threat. (Step 7) If the resources are adequate, the strategy can be formulated. If the resources are not sufficient or adequate, they either must be tailored to match the challenge or, if for any reason one's resources cannot be reconciled with the initial intent, the objective must be modified, which causes the state to repeat the entire process to achieve the new objective. In this paper this framework will be applied to examine NATO's capabilities and limitations in approaching the proliferation of WMD.

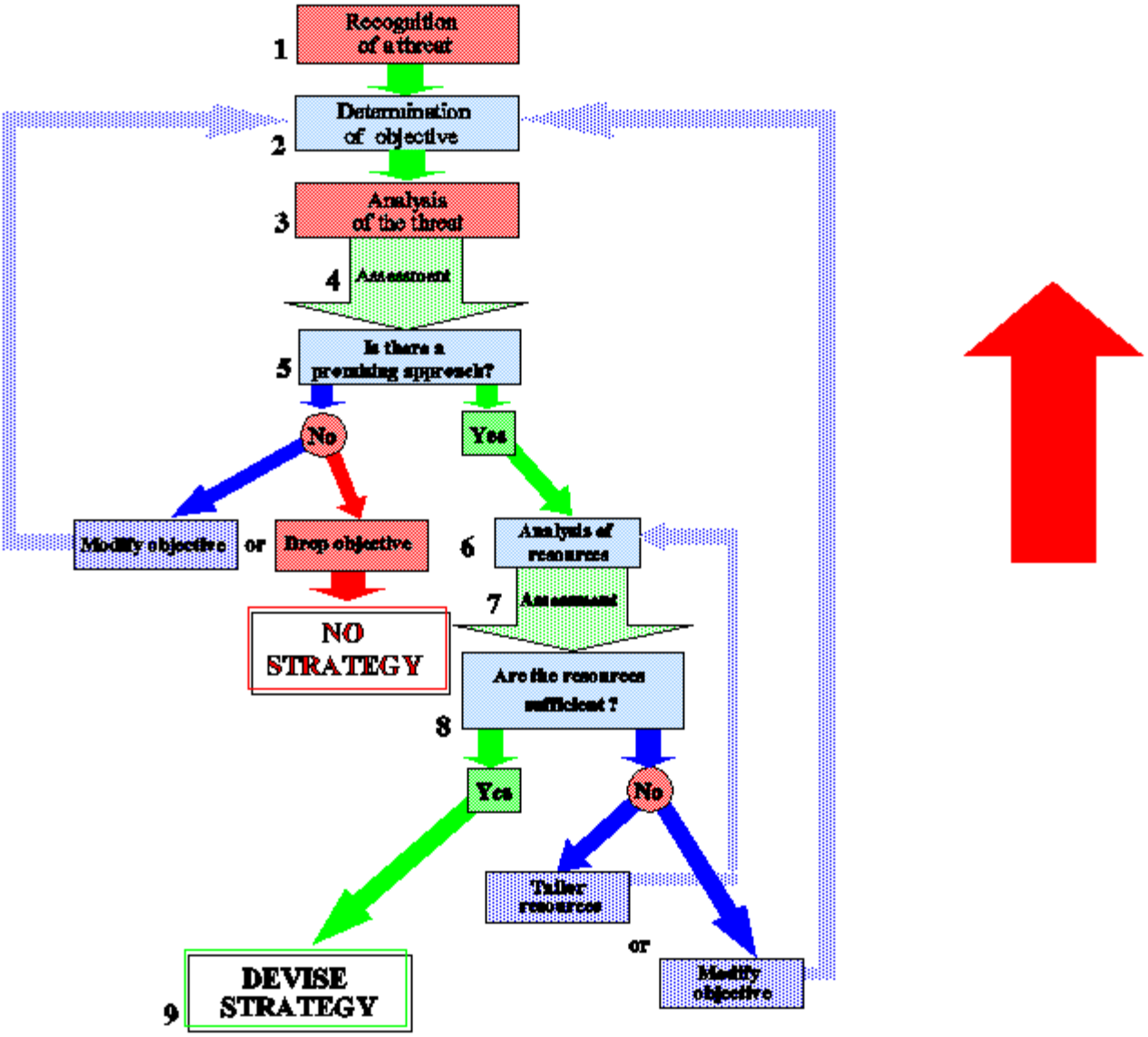

Figure 1

1. Recognition of a threat

Historically, war appears as a regular part of human affairs. In three millennia of recorded history, less than 300 years have been free of armed conflict--despite the fact that people have always recognized the folly, waste, brutality, and inhumanity of warfare and

have continually contempted to limit its devastation and the spread of increasingly destructive weapons.[2]

Therefore, proliferation as such is not a threat that emerged in the modern age. A new dimension, however, was added with the development of the fission bomb by the United States , which brought with it the capability of devastating whole civilizations. Since 1954, when the Soviet Union exploded its first H-bomb, the primary concern of arms control has been to reduce nuclear arsenals and prevent the proliferation of nuclear weapons.[3]

These weapons have been a threat for 50 years, even though their existence probably contributed significantly to the fact that the latter half of the 20th century has not experienced the great and devastating wars of the first half.[4] NATO was clearly aware of this threat during the "Cold War", given that it was a core element in developing NATO defense strategies. Of lesser importance in NATO's past reflections has been the global spread of WMD, largely because the Alliance' "Cold War" strategy focused predominantly on the intentions, forces, and capabilities of the Soviet Union and the Warsaw Pact .

After the collapse of the Soviet Union, there was a dramatic expansion in the proliferation of weapons of mass destruction and in particular nuclear weapons and their respective means for delivery. Countries on the periphery of NATO continue to develop the skills and capabilities for the production of WMD and means for their delivery.

At the same time, since the "Cold War" threat was gone, NATO's perception changed to transform the Atlantic Alliance to reflect the new, more promising, era in Europe.[5] "Flexible Response" gave way to "The Alliance's New Strategic Concept" that was agreed upon by the Heads of State and Government participating in the meeting of

the North Atlantic Council in Rome on 7th-8th November 1991. Articles 12 and 13 of this document give particular attention to the recognition of proliferation of WMD.

> Art. 12. The Allies also wish to maintain peaceful and non-adversarial relations with the countries in the Southern Mediterranean and the Middle East. The stability and peace of the countries in the southern periphery of Europe are important for the security of the Alliance, as the 1991 Gulf War has shown. This is all the more so because of the build-up of military power and the proliferation of weapons technologies in the area, including weapons of mass destruction and ballistic missiles capable of reaching the territory of some member states of the Alliance.
>
> Art. 13. However, Alliance security must also take account of the global context. Alliance security interests can be affected by other risks of a wider nature, including proliferation of weapons of mass destruction, disruption of the flow of vital resources and actions of terrorism and sabotage. . . .

Both articles clearly testify to NATO's concern about the proliferation of WMD and the belief that recent developments are a serious threat to the Alliance's security interests and a challenge to international security. With the recognition of the threat on one hand and the principles of the new strategic concept on the other, NATO cannot just monitor and comment on the situation without taking any actions. NATO must address the threat for two major reasons, first, to coordinate its actions with its new policy, and second, to prove that the issue is not just a artificial substitute for the “Cold War” threat in order to justify the Alliance's further existence.

2. Definition of NATO s Objective

Against this background NATO has to determine its own objectives regarding the threat posed by the proliferation of WMD. The determination of the objectives are irreducible elements of the Alliance's strategy, as national objectives and national power are irreducible elements of national strategy.

> NATO's essential purpose, set out in the Washington Treaty and reiterated in the London Declaration, is to safeguard the freedom and security of all its members by political and military means in accordance with the principles of the United Nations Charter. Based on common values of democracy, human rights, and the rule of law, the Alliance has worked since its inception for the establishment of a just and lasting peaceful order in Europe. This Alliance objective remains unchanged.[6]

This relatively broad objective does not reflect NATO's approach to the specific threat of proliferation alone. In order to meet the characteristics of a useful objective, it must clearly address the Alliance intent to deal with the threat of the proliferation of WMD. Ideally, the definition of the objective should lead to the desired end-state, which is the achievement of a new and more favorable security situation that should be maintained for the future.

The questions, therefore, "What is the ultimate goal?", and “How can we maintain it?”, should be asked and answered before formulating the objective. This is, admittedly, a most difficult task but a very important prerequisite to put theoretical plans into action.

Part III of "The Alliance new strategic concept"--"A Broad Approach to Security"--points in this direction by underlining the Alliance' active pursuit of dialogue and co-operation, underpinned by its commitment to an effective collective defense capability and to expand the opportunities for a genuine partnership among all European countries in dealing with common security problems.

> Para. 27. In this regard, the Alliance's arms control and disarmament policy contributes both to dialogue and to co-operation with other nations, and thus will continue to play a major role in the achievement of the Alliance's security objectives. The Allies seek, through arms control and disarmament, to enhance security and stability at the lowest possible level of forces consistent with the requirements of defence. Thus, the Alliance will continue to ensure that defence and arms control and disarmament objectives remain in harmony.

Yet more precisely paragraph 50 describes NATO's perspective towards the proliferation issue:

> Para. 50. In light of the potential risks it poses, the proliferation of ballistic missiles and weapons of mass destruction should be given special consideration. Solution of this problem will require complementary approaches, for example, export control and missile defences.

An overall examination of NATO's conceptual change as laid down in the 1991 Strategic Concept, from the "Cold War" to the "Post-Cold War" environment clearly shows two major elements in the Alliance's security objectives. The first is to reaffirm the basic principles on which the Alliance has rested since its inception, which is to preserve peace by maintaining a military capability sufficient to prevent war and to provide for effective defense, and second, to adapt to the new security challenges and risks, including inter alia, the threat of proliferation of WMD. This is reflected in three mutually reinforcing elements of Allied security policy; dialogue, co-operation, and maintenance of a collective defence capability.[7] Once the threat is recognized and corresponding objectives have been determined, the threat has to be analyzed and assessed in order to develop a strategy.

3. Analysis of the threat

The simple fact that weapons in general and WMD in particular are wide spread cannot be considered a threat just by itself. Only a second matching element makes proliferation a threat. That is the possessor's intent to actually use these weapons. Consequently the threat assessment involves two successive steps.

The first, to identify current possessors of nuclear weapons, those who try to produce or to get such weapons, and finally, those who <u>probably</u> possess nuclear weapons

or are presumably in a state of developing or pursuing WMD. The second is to identify the states or actors which are willing to use those weapons. This examination of course presents equally difficult challenges, including uncertainty, fog and friction. But these factors are part of the overall problems of the future and can be influenced by a whole variety of reasons and developments, including the fast growth of population, in particular in NATO's southern and south eastern periphery. The "Have Nots" are growing faster than the "Haves" which increases their demands, political upheaval around the world, economic turmoil and increased rivalry; military chaos, conflicts, insurgencies and wars around the world in which more than 30 countries have or are pursuing nuclear weapons or WMD. Within this environment it now is useful to ask how strongly does a nation demand to gain influence in the world's political arena?, how much is it worth for a nation to survive?, how far do their leaders go?, what risk will the leaders take?

There are numerous combinations that identify the intensity or the possibility of a threat, but this leads to the first step of the threat analysis which is the examination of the existence of nuclear weapons and nuclear materials.

a. Existence of Nuclear Weapons

Nuclear Weapons on the Territories of the CIS States. After the disintegration of the Soviet Union the problem of its military heritage, particularly its nuclear component, has become an issue of utmost importance. First attempts to avoid potential nuclear accidents were made by the political and military officials of the former Soviet Union by withdrawing nuclear warheads of different types from politically unstable regions in different republics to storage facilities in Russia. As a result, all Soviet tactical nuclear

weapons were withdrawn from the former Soviet republics and stored in Russia. The last train with nuclear bombs for tactical aviation, nuclear warheads for air defense surface-to-air missiles, and nuclear warheads for sea based tactical weapons left Ukrainian territory on May 6, 1992.

However, while the tactical nuclear weapons of the former USSR are deployed only in Russia, parts of the former Soviet strategic nuclear arsenal (part of the land based ballistic missiles) remain deployed in three republics outside Russia: Ukraine (176 missiles with 1,240 warheads), Belarus (3 divisions with 81 launchers with single warhead mobile missiles) and Kazakhstan (104 missiles with 1,040 warheads). In addition, initially Kazakhstan had 40 heavy bombers with 320 attributed nuclear weapons and Ukraine had 43 with 670 attributed nuclear weapons.[8] (see fig. 2) It is unclear whether their nuclear weapons--air-launched cruise missiles and gravitation bombs-- have been withdrawn.

In addition to the nuclear weapons of the Soviet successor states, other elements play an important role in the threat analysis, including:

- *Shortage of personnel* to maintain nuclear weapons in the armed forces. This could, however, be a short term problem, if civilian and military authorities assign and train additional personnel.
- *The situation within the nuclear storage sites* in Russia is getting worse. It is very obvious that their initial capacity was not intended to store extra nuclear weapons that have been urgently withdrawn from other republics and from unstable regions inside Russia. Even under favorable circumstances Russia will probably not be able to solve these problems on its own. Stealing and smuggling of nuclear material are the consequences.[9]
- *Growing political instabilities and national conflicts* inside and outside Russia made nuclear weapons targets for terrorists, which could try to seize those weapons in particular during transport where security precautions are even less stringent than in the storage sites.
- *Disintegration* has brought new and unforeseen challenges to the system which seeks to prevent unauthorized and accidental launches of nuclear weapons. It is hard to expect that the early warning network can be used exclusively by Russia anymore. Ultimately, this leads to the following paradox: the military

confrontation between the two nuclear superpowers is gone, but the probability of an accidental nuclear launch has grown.

- Massive reductions in nuclear weapons raise the problem of the disposition of weapon-grade fissile materials, especially plutonium.[10]

Other Regions. While China, Israel and India are known and Pakistan is widely presumed to possess nuclear weapons, there is a high degree of instability and uncertainty in other areas. In the foreseeable future, countries such as Iran, Iraq, and North Korea may be able to acquire nuclear weapons capabilities. Some suspect that Algeria, Syria or, Lybia seek such weapons. Scenarios of future proliferation developments include even countries like Turkey, Poland, Serbia, Armenia, and Sweden.[11]

Nuclear Assets of the Soviet Successor States

Country	Nuclear Weapons	Nuclear Power Reactor	Nuclear Research Reactor	Nuclear Weapons Design	Uranium Mining, Milling	Uranium Enrichment Capability	Fuel Fabrication, Facility	Plutonium Production, Handling	Heavy Water Production	Other NSG * Controlled Material	Nuclear Research Center	Nuclear Test Site	Acceded To NPT	NSG Member
Armenia		a									X		X	
Azerbaijan														
Belarus	X		b								X			
Estonia					X								X	
Georgia			c								X			
Kazakhstan	X	X	X		X		X	e		g	X	X		
Kyrgystan					X									
Latvia			X								X		X	
Lithuania		X											X	
Moldova														
Russia	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Tadijkistan					X				X					
Turkmenistan														
Ukraine	X	X	X		X				X	h	X			
Uzbekistan			X		X	d					X		X	

* Nuclear Suppliers Group

a The two Armenian reactors were shut down in 1988 for safety reasons, but the Armenian government is planning to restart them despite local and international opposition

b The IRT-M Minsk research reactor was shut down in 1988

c The IRT-M Tiblisi was shut down in 1990

d A uranium enrichment facility probably existed at Navoi during the 1970's and 80's.

e A hot cell is reportedly located at the Semipalatinsk test site

f Although one report of an Armenian heavy water site has appeared in print, there has been no additional confirmation

g The Ulbinsky Metallurgy Plant in Ust-Kamenogorsk produces beryllium and possibly zirconium

h Zirconium, halfnium, uranium oxide, and ion exchange resins are reportedly produced in Ukraine at the Pridneprovsk Chemical Factory

Source:

William Potter, in Joachim Krause, Kernwaffenverbreitung und internationaler Systemwandel, Baden-Baden, 1994

Figure 2

b. Causes of Proliferation

Arms proliferation in general is driven by various causes. The first is the demand created by those nations who want to possess nuclear weapons or WMD for one or any combination of political reasons. For example, a nation may perceive danger from outside and seek WMD capabilities to prevent coercion and to discourage the use of force by others. A nation may develop coercive designs on others to obtain freedom of action at a regional level. A nation may seek to enhance its international status or to gain recognition as a major regional or global player.[12]

The second is for economic reasons created by those nations who want to take advantage of the high level of profitability that is normally involved in the trade of WMD and their means of delivery. Profit is an important proliferation pressure both for illegal sales, primarily dealing with materials stolen from military stocks or by making good use of the selfish interests of corrupt officials, and for official trade under the supervision of an export control body.

A third unique proliferation opportunity occurred when 2,000 to 3,000 former Soviet experts and specialists lost their jobs when the Soviet Union dissolved. The potential exodus of these specialists seeking new employment created a “nuclear brain drain” and a transfer of their know-how into other states.

4. Assessment

NATO clearly regards proliferation as a threat and a major challenge to international security. This includes the political, military, and economic interests of nation states as mentioned above as well as "non-state-actors" and terrorist groups.

> The term "non-state-actors" refers to the groups, movements or organizations that do not have the responsibilities normally associated with sovereign states. These actors are distinguished by their proclivity to support ideologies that seek to destroy the status quo through the acquisition of nuclear weapons at some undetermined future point.[13]

The actual assessment of the overall situation illustrates the complexity of the proliferation phenomenon and leads to two major questions that have to be answered to be sure whether it seems possible to successfully deal with the threat.

First, is the threat immediate, i.e., are nations or "non-state-actors" willing and about to actually use WMD against any NATO member state?

At present, certainly, the answer to this question is negative. This does not mean, however, that this is a viable answer once and for all. Consequently, precautionary measures have to be initiated to be able to counter the situation whenever it will occur. Those measures will primarily be of a military nature.

Second, is the threat rather indirect, i.e., can nations or "non-state-actors" through possession of WMD and their means of delivery achieve the ability to compel or blackmail NATO or any member state? This question, obviously, is more relevant to todays security environment, especially because the risk can hardly be calculated and depends solely on the intent and will of a single violent leader or evil regimes. The likelihood of acquiring WMD as a means to compel, to blackmail or to actually use depends predominantly on two variables: the security environment of a state's region and the nature of a state's politics. These variables are shown in figure 3.[14]

The Likelihood of Acquiring WMD

		REGIONAL SECURITY ENVIRONMENT	
		Unstable/ Dangerously	Stable/ Unthreatening
COUNTRY'S POLITICS	Democratic/ Consensual	*Medium*	*Low*
	Authoritarian	*High*	*Medium*

Figure 3

The indirect threat through proliferation of WMD needs to be countered in a different manner. Since in this case the primary goal is prevention of the spread und ultimately the use of WMD, measures have to be taken on the political level. Therefore both, political and military measures have to be considered when answering the next question:

5. Is there a promising approach?

The answer is not meant to be the final solution. It rather distinguishes in what way to proceed in preparing the final strategy. The answer can be either Yes or No. "No" would mean to either modify the initial objective or to stop the process of preparing a strategy and accept the status quo.

NATO has given the answer to the proliferation issue at the Brussels Summit on 10-11 January 1994:

> 1. We, the Heads of State and Government of the member countries of the North Atlantic Alliance, have gathered in Brussels to renew Our Alliance in light of the historic transformations affecting the entire continent of

> Europe. We welcome the new climate of cooperation that has emerged in Europe with the end of the period of global confrontation embodied in the Cold War. However, we must also note that other causes of instability, tension and conflict have emerged. We therefore confirm the enduring validity and indispensability of our Alliance. . . .
>
> . . . 17. Proliferation of weapons of mass destruction and their delivery means constitutes a threat to international security and is a matter of concern to NATO. We have decided to intensify and expand NATO's political and Defence efforts against proliferation, taking into account the work already underway in other international forums and institutions. In this regard, we direct that work begin immediately in appropriate forums of the Alliance to develop an overall policy framework to consider how to reinforce ongoing prevention efforts and how to reduce the proliferation threat and protect it. . . .[15]

NATO's answer to the question of whether or not the proliferation threat can be approached in a promising manner is definitely "Yes, it can," which consequently leads to a detailed analysis of NATO's resources, comprising both political and military means and capabilities.

6. Analysis of resources

It is "NATO's essential purpose, set out in the Washington Treaty and reiterated in the London declaration, to safeguard the freedom and security of all its members by political and military means in accordance with the principles of the United Nations Charter. . . . This Alliance objective remains unchanged."[16] Since proliferation is of major concern to NATO, both, political and military means have to be defined, analyzed and assessed towards their capabilities to counter the threat. Figure 4[17] depicts the means available to the Alliance if considered appropriate:

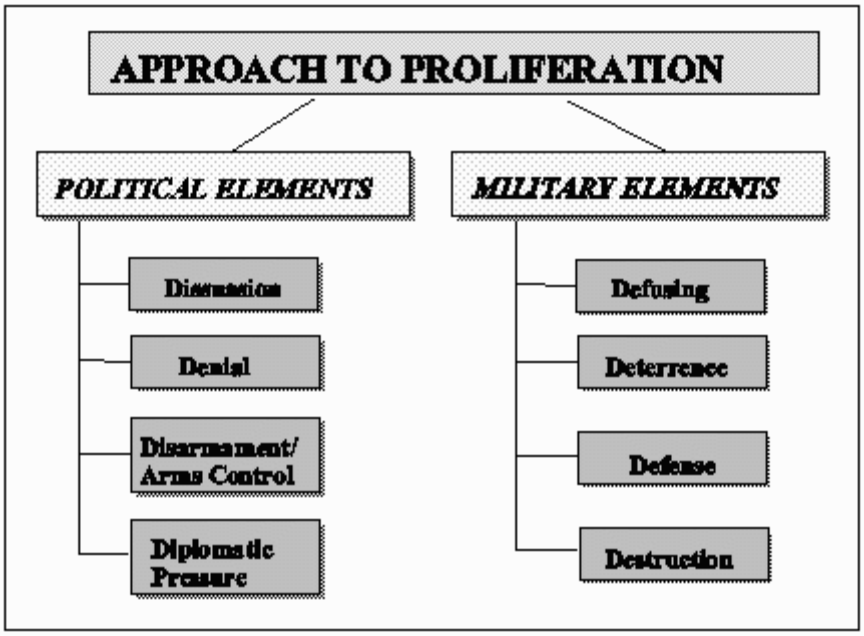

Figure 4

a. Political elements

The political process in general as well as the security decision making in particular within an alliance differs remarkably from the same process in a single nation. Whereas political decisions, actions and reactions on a unilateral basis can adapt to changing situations relatively quickly, and great nations can afford to act solely in their own interest, alliances normally depend on consensus and unanimity. Political processes and decision cycles within alliances take more time.

What seems to be detrimental on one hand, however, proves to be of advantage on the other. International arrangements slow down sharp shifts in politics. Multilateral decisions, agreements and strategies survive longer periods of time. Burdens and responsibilities can be shared.

This must be considered when analyzing NATO's political elements and means to counter the threat of proliferation. It is

> "the fundamental operating principle of the Alliance that of common commitment and mutual co-operation among sovereign states in support of the indivisibility of security for all of its members. Solidarity within the Alliance, given substance and effect by NATO's daily work in both the political and military spheres, ensures that no single Ally is forced to rely upon its own national efforts alone in dealing with basic security challenges *(e.g. proliferation of WMD)*. Without depriving member states of their right and duty to assume their sovereign responsibilities in the field of Defence, the Alliance enables them through collective effort to enhance their ability to realize their essential national security objectives."[18]

Dissuasion. Despite the fact that nuclear weapons contributed to a great extent to peace in Europe and around the world, we know that international security arrangements are best suitable to promote security and stability in any given region. By doing so they contribute to a high degree to the prevention of proliferation of WMD. The NATO/U.S. "nuclear umbrella," for example, was designed to serve two major reasons: First, to provide sufficient security guarantees to non-nuclear allies, and second, to eliminate their motivation or desire to acquire nuclear weapons of their own.[19] In that interest is the agreement of at the Brussels summit of the North Atlantic Council in January 1994, where the Heads of State and Government agreed:

- to reaffirm that the Alliance remains open to the membership of other European countries,
- to launch a major initiative through a Partnership for Peace, in which we invite Partners to join us in new political and military efforts to work alongside the Alliance, and
- to intensify our efforts against the proliferation of weapons of mass destruction and their means of delivery.

The stabilizing contributions of alliances in general caused only a few of the increasing number of countries able to produce weapons of mass destruction to do so, e.g., any of the developed countries, i.e., the 24 members of the OECD, could have acquired this weapons long ago; only three have done so.[20]

Denial. Within the last several years export controls--as the most common element of denial--have gained more importance. At present, there are three international export control regimes which cover the most important categories of WMD and their means of delivery. The *Nuclear Suppliers Group (NSG)* and the so called *Zangger Committee* take care of agreements on exports of nuclear material. The Australia Group, established in 1985, is supposed to facilitate agreements on export controls in the area of biological and chemical weapons. The *Missile Technology Control Regime (MTCR)* coordinates the export policy of its 16 member states since 1987 in the area of missile technology.[21]

An even broader consensus on export control was found in spring of 1992, when the 27 members of the NSG agreed in Warsaw to extend nuclear export controls to cover more than 60 dual-use items and also agreed to require full-scope safeguards as a condition of all nuclear supplies. However, even under the assumption that NATO's intent is to improve nuclear export control policies by adopting and possibly strengthening the guidelines of all of the above mentioned regimes and to endorse the adherence and the indefinite and unconditional extension of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), the Alliance's means and capabilities to actually control the export of WMD are rather weak when we consider the degree of inofficial and illegal transfers of nuclear material and technologies. It is, therefore, in NATO's interest to promote and support multilateral agreements to combat nuclear smuggling and inofficial trades. One example is the 8/22/94 agreement between Russia and Germany to:

> cooperate to prevent the smuggling of nuclear materials by tightening border controls and improving the exchange of information between their intelligence agencies, officials of both countries said.

> A series of seizures in Germany of bomb-grade nuclear material, including one large shipment of 10.5 ounces of plutonium 239 on a Moscow-Munich flight, prompted three days of talks here between Chancellor Helmut Kohl's intelligence coordinator, Bernd Schmidbauer, and top Russian nuclear and security officials.
>
> . . . Both sides agree that illegal transactions with nuclear materials, regardless of where they come from, pose serious dangers. . . . Broader and deeper cooperation is needed to block criminal activities in this field.[22]

Disarmament/Arms Control and Diplomatic Pressure. As stated at the Brussels Summit, NATO

> Attaches crucial importance to the full and timely implementation of existing arms control and disarmament agreements as well as to achieving further progress on key issues of arms control and disarmament, such as:
>
> - the indefinite and unconditional extension of the Treaty on Non-Proliferation of Nuclear Weapons (as mentioned above), and work towards an enhanced verification regime;
> - the early entry into force of the Convention on Chemical Weapons and new measures to strengthen the Biological Weapons Convention;
> - the negotiation of a universal and verifiable Comprehensive Test Ban Treaty;
> - issues on the agenda of the CSCE Forum for Security Cooperation;
> - ensuring the integrity of the CFE Treaty and full compliance with all its provisions."

One of the most important agreements on arms control is the NPT. Its goal is to restrict the development, deployment, and testing of nuclear weapons to ensure the nontransference of weapons, materials, or technology to non-nuclear states. Whether or not a state accepts the conditions and signs the treaty is at the discretion of the particular state. Thus, among recognized nuclear powers France, India Pakistan, Israel and China have not accepted it. In 1993 North Korea threatened to withdraw from the treaty after refusing to let inspectors examine its sites of suspected nuclear weapons production.[23]

Major arms control measures, however, were achieved through direct negotiations between the superpowers and their allies, such as the Partial Test Ban Treaty (1963), the Treaty on the Non-Proliferation of Nuclear Weapons(1968) and the first Strategic Arms Limitation Treaty (SALT I, 1972).[24] It is noteworthy that even those treaties could not prevent that the buildup of nuclear weapons by the Soviet Union and the United States accelerated both quantitatively and qualitatively in the 1970s and early 1980s.

b. Military elements

Even though the main reason for NATO's military build up is gone, the Alliance still possesses an enormous military capability, covering both, conventional and, primarily via the United States, nuclear forces and elements. Those forces, however, were tailored to meet the requirements of NATO's out-dated strategy of "Flexible Response," of which these forces probably are still able to do, assuming that a serious surprise-attack is not to be expected.

Is NATO able to react militarily if political actions to prevent proliferation and to eliminate the threat of WMD fail? To answer this question the following intelligence and military measures should be considered, keeping in mind, that the military option should remain that of last resort :[25]

Defusing *Threats and tensions*. Uncertainty, concealment and disinformation are major elements in the field of proliferation of WMD. To defuse threats and tensions it is important to provide accurate, timely and convincing threat detection and assessment, to broker disputes between states and to share Permissive Action Link (PAL) technologies to improve stability when proliferation occurs.

Deterring *potential aggression.* In order to establish and maintain credible and effective deterrence capabilities, it is necessary to build accurate intelligence assessments for potential use, to maintain powerful deterrent threats to high-value targets, and to be able to take defensive, protective and recovery measures.

Defense *against potential and actual attack*. Accurate and early warning and attack assessments is essential for defense against potential and actual attacks. To be most effective, precise coordination between Alliance members has to be increased, as well as the interoperability of C^3 and Anti Tactical Ballistic Missile (ATBM) capabilities. Passive protection measures have to be taken, considering the medical implications of the use of WMD, as well as protection of population and forces.

Destruction *of potential offensive capabilities.* To ensure effective destruction of an aggressor's offensive capabilities, tactical intelligence for targeting and damage assessment has to be gathered and reliable and discriminate hard-target and mobile-target kill capabilities have to be provided.

7. Assessing of NATO s resources

a. Political dimensions

The four major political elements, i.e., *dissuasion, denial, disarmament/ arms control* and *diplomatic pressure*, which are available to the Alliance to prevent or to reverse the proliferation of weapons of mass destruction and their means of delivery are primarily related to and depend on treaties and agreements which NATO is not immediately involved in. For the Alliance, therefore, as for other multinational organizations, it is extremely difficult if not impossible to succeed in making member

states adhere to such treaties or agreements. A credible counter proliferation policy should be able to raise the costs for behavior that is inconsistent with this goal. It must be recognized that diplomatic pressure and sanctions are difficult to apply and are not always successful.

It is notable that the United Nations' situation parallels that of NATO. The UN established several committees on disarmament and was involved in negotiating treaties to ban nuclear weapons in outer space and the development of biological weapons. The International Atomic Energy Agency (IAEA) has helped to control the proliferation of nuclear weapons by inspecting nuclear installations to monitor their use. Even though the UN is more powerful than NATO in this respect, it is not likely that we will achieve overwhelming results in banning the spread of WMD.

b. Military elements

While NATO must continue to strengthen political and cooperative efforts to approach the proliferation threat, as a defensive alliance it also has the responsibility to consider means to protect its members against WMD and their means of delivery. Those military or defensive elements are *defusing, deterrence, defense and destruction.* Part of the defense measures and almost all of the means to guarantee effective destruction are suitable to actually counter the threat created by proliferation of WMD. It is remarkable that the term *counter-proliferation* so far is not mentioned in respective NATO documentation, although at present NATO seems to be best prepared for two out of the four military elements: Deterrence--and the last resort--destruction.

8. Are the resources sufficient to counter the threat?

By answering the question whether or not NATO's political and military elements are sufficient to effectively approach or eventually counter the treat of proliferation, it must be realized that the Alliance has taken on an extremely difficult challenge and maneuvered itself into a rather ambiguous, if not paradoxical situation. On one hand, NATO clearly stated that its objective is, "to develop a policy framework to consider how to reinforce ongoing prevention efforts and how to reduce the proliferation threat and protect against it."[26]

On the other hand, the assessment of NATO's political and defensive resources and capabilities proves clearly that they are deficient in various areas. The political elements cannot be used beyond the intention *to assess* the potential proliferation risk presented by states on NATO's periphery, as well as relevant developments in areas beyond NATO's periphery; *to consult* regularly on WMD proliferation threats and related issues and coordinate current Alliance activities that involve aspects of WMD proliferation issues; and *to examine* whether there are ways to contribute, through diplomatic or technical measures, to the implementation and strengthening of international arms control, disarmament and non-proliferation norms and agreements. The use of the defensive elements, at least in peacetime, is limited *to examine* the current and potential threat to Allies posed by WMD proliferation, taking into consideration major military/technological developments, *to examine* the implications of proliferation for defense planning and defense capabilities of NATO and its members, *to seek to improve* defense capabilities to protect NATO territory, populations and forces against WMD use,

and *to consider* how its defense posture can support diplomatic efforts to prevent proliferation before it becomes a threat.[27]

It must be realized, therefore, that NATO's resources at present are not perfectly tailored and sufficient to prevent the spread or eliminate the threat through WMD effectively and lasting. Thus, according to the logical flow of the process to prepare a strategy (fig. 1), NATO could either tailor its resources and capabilities or modify its objective, rather than devising a strategy.

Here is where the paradox comes into play. NATO can neither afford to modify its objective to credibly deal with the threat of the proliferation of WMD, nor is it feasible to tailor its defensive elements within a reasonable period of time to match the perceived threat in all respects. Nor can the Alliance afford not to take any actions, i.e., not to devise plans and policies to achieve its objective. Consequently, it was NATO's decision to implement institutional arrangements in order to deal with the challenge in the most effective manner possible, considering all of these shortcomings. The intention is to develop an appropriate policy framework that encompasses a wide range of flexible political and military solutions.

9. Devise a Strategy

Following the direction given to NATO by the Heads of State and Government in January 1994 to "develop an overall policy framework to consider how to reinforce ongoing prevention efforts and how to reduce the proliferation threat and protect against it," the Alliance implemented institutional arrangements to accomplish this task. It therefore established three working groups which are:

> The Senior Politico-Military Group on Proliferation (SGP), the Senior Defence Group on Proliferation (DGP) and the Joint Committee on Proliferation (JCP).

The SGP was tasked to develop an overall policy framework, which was issued at the "Ministerial Meeting of the North Atlantic Council" held in Istanbul, Turkey on 9 June 1994. The document covers first, the Proliferation Challenge, second, NATO's Role, third, the Political Dimension, fourth, the Defense Dimension. It puts special emphasis on the political-military interaction and "will be kept under review in order to reflect developments in the proliferation field and the evolution of non-proliferation policies."

The DGP is tasked to examine the defense-related issues. To date, the workgroup produced several documents and gave respective reports to the coordinating group, i.e., the JCP. Furthermore the group addressed how to accomplish its future task. It developed a working plan consisting of the following three phases: Phase I: Risk Assessment, which was completed in December 1994 and articulated in a classified document. Phase II: Way Ahead, Implications and Needed Capabilities, to be assessed by spring of 1995. Phase III: Assessment of Current Capabilities, Identification of Deficiencies and Recommendations of how to Correct these Deficiencies not later than summer 1996.

The JCP in turn will provide consolidated reports and recommendations to the Council for taking further action as appropriate. These arrangements reflect the necessity for an overall political-military approach to the complex problem of proliferation of WMD. NATO cannot afford to only depend on preventive political activities, but also must consider military actions to prevent proliferation and to protect states.[28]

III. CONCLUSION/RECOMMENDATIONS

The "Cold War" ended with the apparent success of NATO in surmounting the challenge of the Communist bloc. By addressing the objective of approaching the threat of proliferation of weapons of mass destruction and their means of delivery, NATO has taken on a challenge of profound importance. It is a extremely difficult to prevent, to protect and eventually to counter the threat created by the proliferation of WMD. In the "Cold War" the "front lines" were clearly visible and relatively rigid. The current environment is highly unstable, unpredictable, and dangerous. This paper described NATO's perception of the proliferation threat, examined the Alliance' resources, and described its capabilities and limitations. Special emphasis was put on the importance of close cooperation and interaction of the political and the military elements in NATO's activities. The true value of NATO's approach, however, will not be determined by the Alliance itself, but it will be determined by answering the question: "How do the 'addressees' perceive NATO's approach ?" The Alliance's efforts will be successful only when it either succeeds in convincing other states to join and to adhere to treaties or through credible and serious deterrence.

Recommendations

There are several critical recommendations to help NATO organize its efforts to implement an effective and credible policy of preventing the proliferation of WMD.

1. *Promote political stability*. Regional turmoil and conflicts as well as internal political problems of a nation are often the basis for proliferation. The demand to either control a region or simply to gain attention within the world-wide political environment may cause nations to pursue the possession or the development of WMD or their means of delivery. NATO should take any

chance possible to promote political stability in any region of the world. Political and diplomatic approaches are the primary means.

2. *Promote the formation of alliances*. Alliances most likely delimit the demand of single nations to gain world wide attention. Sharp shifts in political behavior are unlikely, as are the intentions to coerce neighbors or regions as a single player. NATO should support the formation of alliances even if their political structure is not perfectly in line with NATO's interests and values in every respect.

3. *Promote the expansion of alliances.* For this reason, existing alliances should be expanded. It is of utmost importance, however, not to make expanding alliances appear as a threat to other regions, alliances, or single nation states. In that respect, the integration of former Warsaw Pact countries into NATO has to be considered very carefully.

4. *Support sanctions by UN.* Despite the fact that sanctions dictated by the UN are often difficult to apply, they can be useful in many ways to counter disharmony, to prevent the spread of military conflicts, and thereby prevent one nation from being overpowered or compelled by others, which in turn can initiate the demand to possess WMD. In general, NATO should support UN actions by appropriate means, including military action as a last resort. This should include bans on the transfer of sensitive dual-use items for civil end users in countries such as Iran. NATO members must find consensus among the competing interests of non-proliferation goals and commercial benefits. In addition, preventing nuclear smuggling should be of highest priority in all NATO member states.

5. *Support export control measures.* The profit motive is very often the reason for proliferation. NATO should support the strict adherence to export control means and measures even if it is in part not to the advantage of member states.

6. *Develop strategies, plans and policies.* NATO is clearly in a position to respond. Therefore, the Alliance must proceed in developing "responsive strategies". By doing so, however, it is most important to keep theoretical plans in line with actual political and military capabilities. Political objectives should not be changed without adjusting respective military resources and assets. The Alliance would lose all of its credibility if it was not able to react as planned and proclaimed. NATO's intents must be clearly defined and respective plans must provide the flexibility to react to the political, security, and economical situation of various states, regions and even non-state actors.

7. *Eliminate at least one essential element of the threat.* The proliferation threat consists of two essential elements: First, the possession of WMD, and second, the intent to use them. NATO should try to eliminate at least one of the two

elements as the ultimate goal. Political means can help to prevent possession as well as influence the will of the possessor.

8. *Intensify efforts on Information Warfare.* Knowledge is power. NATO should use all means of information warfare to gather detailed knowledge of developments in the area of proliferation of WMD. Only timely and accurate information allows preventive action as well as the ability to react when needed. To get access to the decision making process of possessors or non-possessors can prevent the spread or the use of WMD.

9. *Think about unconventional measures*. Should NATO be able to act like a single nation state for the sake of security of its members? Should the Alliance therefore think about preventive military actions if a threat is imminent, following the adage "prevention is better than cure?" Single nation states have done so in the past in the defense of their own national interest. Why should NATO not do so as well in the interest of all its member states? Should the term "Counter-proliferation" officially be used in the future to underline the seriousness and credibility of the Alliance's activities?

Notes

[1] Rowen, Henry S. in Joachim Krause, "Kernwaffenverbreitung und internationaler Systemwandel" (Nomos Verlagsgesellschaft Baden-Baden, Germany 1994) p. 77.

[2] Luttwak, Edward N., "Arms Control International," Microsoft (R)Encarta, 1993.

[3] Ibid.

[4] Rowen, Henry S. in Joachim Krause, "Kernwaffenverbreitung und internationaler Systemwandel" (Nomos Verlagsgesellschaft Baden-Baden, Germany 1994) p. 75.

[5] "The Alliance's New Strategic Concept", (Brussels,Belgium, NATO Press service) 7th November 1991 , para. 1.

[6] Ibid., para. 16.

[7] Ibid., para. 25.

[8] Konovalov. Alexander A./Sutiagin, Igor in Joachim Krause, "Kernwaffenverbreitung und internationaler Systemwandel" (Nomos Verlagsgesellschaft Baden-Baden, Germany 1994) p. 135.

[9] Out of many one example is given:

New York Times, 15 February 1995:

> "PRAGUE, Feb. 7 - Acting on a tip from an anonymous female telephone caller, the Prague police swooped down on a smart blue Saab on a crowded shopping street at midday just before Christmas *(1994).* As they were told they would, the police

found highly enriched uranium stashed on the back seat in metal canisters - 2.7 kilograms, or about 6 pounds' worth.

Since the uranium was seized, Czech investigators and Western officials interviewed have determined that the Prague cache was 87.7 percent uranium - 235 in oxide form, and the smugglers were former nuclear workers, who knew what they were handling.

It turned out to be by far the biggest seizure to date of highly enriched uranium in what defense officials say has become a major threat to United States security in the post-cold war era - the illicit trade in radioactive materials from the former Soviet Union and other former Communist countries.

But merely verifying that the uranium is real is only the beginning. The real mystery is where it came from and who it was destinated for.

The car carrying three former nuclear workers from the Czech republic, Belarus and Ukraine, and the gray powder on the back seat, was yet another reminder, that much remains to be done to encourage the Russians to improve their nuclear safeguards, nuclear experts say."

[10] Konovalov. Alexander A./Sutiagin, Igor in Joachim Krause, "Kernwaffenverbreitung und internationaler Systemwandel" (Nomos Verlagsgesellschaft Baden-Baden, Germany 1994) pp. 155 -157.

[11] Joachim Krause, "Kernwaffenverbreitung und internationaler Systemwandel" (Nomos Verlagsgesellschaft Baden-Baden, Germany 1994) p. 37.

[12] Rowen, Henry S. in Joachim Krause, "Kernwaffenverbreitung und internationaler Systemwandel" (Nomos Verlagsgesellschaft Baden-Baden, Germany 1994) p. 77.

[13] Martel, William C. "Nuclear Coexistence--Rethinking U.S. Policy to Promote Stability in an Era of Proliferation", Martel, William C./Pendley, William T. (Air University, Maxwell Air Force Base, Al), 1994, p. 109.

[14] Rowen, Henry S. in Joachim Krause, "Kernwaffenverbreitung und internationaler Systemwandel" (Nomos Verlagsgesellschaft Baden-Baden, Germany 1994) p. 72.

[15] NATO Press Service, Press Communique M-1(94)3, "Declaration of the Heads of State and Government participating in the meeting of the North Atlantic Council held at NATO headquarters, Brussels, on 10-11 January 1994.

[16] "The Alliance's New Strategic Concept", (Brussels,Belgium, NATO Press service) 7th November 1991, para. 16.

[17] German Armed Forces Staff III 5, “NATO-Ansatz zur Proliferation” (Bonn, Germany) 13 June 1994.

[18] "The Alliance's New Strategic Concept", (Brussels,Belgium, NATO Press service) 7th November 1991 , para. 18.

[19] See Panofsky, Wolfgang K.H. / Bunn, George, “The Doctrine of the Nuclear-Weapon States And the Future of Non-Proliferation”, *Arms Control Today*, July/August 1994, p 6.

[20] See Rowen, Henry S. in Joachim Krause, "Kernwaffenverbreitung und internationaler Systemwandel" (Nomos Verlagsgesellschaft Baden-Baden, Germany 1994) p. 74.

[21] See Krause, Joachim , "Kernwaffenverbreitung und internationaler Systemwandel" (Nomos Verlagsgesellschaft Baden-Baden, Germany 1994) pp. 274-278.

[22] See Erlanger, Steven, “Germany and Russia Agree To Combat Nuclear Smuggling”, *New York Times*, August 23, 1994, p. A5.

[23] See Luttwak, Edward N., "Arms Control International," Microsoft (R) Encarta, 1993.

[24] Ibid.

[25] See Latter, Richard , “The Increased Danger of Biological Weapons Proliferation”, Jane’s Intelligence Review, February 1994, pp. 93-95.

[26] See NATO Press Service, Press release M-NAC-1 (94) 45, “Alliance Policy Framework on Proliferation of Weapons of Mass Destruction”, Brussels, Belgium, 9 June 1994, para. 1.

[27] Ibid., para 7-13.

[28] German Armed Forces Staff III 5, “NATO-Ansatz zur Proliferation” (Bonn, Germany) 13 June 1994.