A PRIMER ON THE
FUTURE THREAT

THE DECADES AHEAD: 1999-2020
"Reverence for the past is important but so is regard for the future."
— Brad Herzog

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THE DECADES AHEAD
1999-2020
(The Purple Book)

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"My interest is in the future because I am going to spend the rest of my life there."

Charles Kettering
This is the fourth edition of the Primer on the Future Threat and my final as the Director of DIA. My intent remains to provide a thought provoking document that highlights for decisionmakers and long range planners those threats and challenges that may emerge in the period 1999–2020 and beyond. Over the past five years, the Department of Defense has grown increasingly concerned with the future global security environment, in part because of the ambiguity and uncertainty that we expect will continue to characterize the global condition. Lacking the central threat focus of the Cold War, we must anticipate a much broader set of challenging circumstances and conditions. This primer endeavors to help decisionmakers and planners by illuminating key trends that will impact the world of the 21st century, identifying critical uncertainties, and addressing potential implications for the nature of conflict and warfare.

The primer is organized into five main sections: global issues, regional assessments, forces and science trends, the nature of future warfare, and an outlook section. Each individual section is designed to 'stand alone;' collectively, these 'chapters' provide a comprehensive depiction of the spectrum of diverse threats and challenges confronting our nation over the next two decades. While the message is sobering, my intent in preparing this primer is not to instill fear or forboding. Rather, I hope that by identifying and discussing in realistic terms the emerging threat environment, such knowledge will help leadership better understand and prepare for it.

Finally, a word about my approach to analyzing the future. For the purposes of organization and 'readability,' this primer is presented in a linear fashion. Accordingly, the projections and assessments depicted here generally represent a 'best estimate' in light of current trends. However, I understand that the process of global change is essentially non-linear, that events will likely unfold in unanticipated ways, and that the complex interaction of multiple trends will yield startling results. I deal with this dynamic by sponsoring numerous 'alternative futures' analyses, examining various 'wildcard' (low probability but high impact) scenarios, and by ensuring that the process of developing these annual primers remains dynamic in content and character.

Knowledge is power
Insight is greater power

PATRICK M. HUGHES
Lieutenant General, USA
I. Executive Summary

Preview of the Future Threat

(U) The past ten years have been marked by dynamic change and great uncertainty. The next decade is likely to be equally so because the basic engines of turmoil remain largely in place. The volatile mix of global political, economic, social, technological, and military conditions will continue to bring great stress to the international order. No condition, circumstance, or power is likely to emerge over the next 10-20 years that will somehow transcend these ‘sources of instability’ and lead to a more stable global order.

(U) This dynamic change has spurred a dramatic increase in the operations tempo of U.S. and allied forces. Our increased daily global engagement posture, consequently, limits the forces and resources available to respond immediately to other, potentially more demanding, regional warfare contingencies. The same is true for defense intelligence resources. The analytic challenge of assessing the future threat has never been greater, as a multitude of emerging trends irreversibly impact the global security environment. One of the most challenging trends is the increasing criticality of information, its rapid dissemination and integration, as well as its subsequent management. Proper use of information can aid in the creation of a more benign and stable security environment, while improper use can exacerbate the current stressful conditions.

(U) During the next two decades a new security paradigm will evolve — one in which the United States faces a generalized global set of competitors and potential adversaries, the troubling proliferation of ‘negative’ technologies, and the existence and — at times rapid — emergence of numerous persistent small-conflict conditions and situations. The new global condition will affect every aspect of military action, including the planning and execution of current operations, and the development of the strategy, organization, and equipment that will shape and define our future forces.

(U) Though there is little chance the U.S. will confront a Soviet-like global military challenger during the first ten years of the new century, threats and threatening conditions remain, and others will emerge over time. Collectively, the combined impact of numerous local, regional, and transnational challenges presents a formidable obstacle to our strategic vision. The most important of these are discussed in the five main sections of the primer.
GLOBAL ISSUES AND ASSESSMENTS

(U) Critical global issues surrounding weapons and technology proliferation are potentially the most dangerous and at times the hardest to assess. The direct threat to U.S. forces and interests worldwide is increasing in consonance with the proliferation of nuclear, chemical, and biological weapons, missiles, and other key technologies. Indeed, this represents the greatest potential threat to U.S. national security extant.

(U) Other critical global issues concerning demographics, resources, health, and climate often have an indirect and less apparent impact on our security. The global dynamic will continue to spur numerous regional and local “crises.” Prolonged tensions in the Middle East, the Balkans, and the Aegean; significant tensions on the Korean peninsula; ethnic, tribal, and religious disputes throughout many parts of Africa; continued hostility between India and Pakistan; ongoing border disputes between several nations; and ethnic and political conflict in resource-rich Central Asia—all have the potential to erupt abruptly into larger conflicts. Meanwhile, a host of other issues—e.g. humanitarian emergencies, migration, health issues, and environmental degradation—will become increasingly problematic. International terrorism, drug trafficking, illicit arms transfers, and other criminal activity pose direct daily threats to U.S. citizens, property, resources, and interests. The sophistication and significance of these threats will likely increase over the next twenty years.

REGIONAL ASSESSMENTS

(U) Major powers and their relationship to each other will remain complex and intertwined. Russia and China—both undergoing lengthy and difficult transitions—will retain important strategic and operational military capabilities and likely represent our most important long-term nation-state concerns. Other major powers may compete more openly among themselves and with the U.S.—in attempting to shape the future according to their interests.

(U) Large regional powers possess aggregate capabilities and are integral to our regional interests. Select regional powers—e.g. North Korea, Iraq, Iran—will retain the military capability to directly attack our allies and our interests with little warning. North Korea’s continued belligerence poses some serious concerns as well. Though analytical opinion is divided on if and when the Korean peninsula will be reunited, the eventual outcome will weigh heavily on U.S. interests in the region.

DEFENSE SYSTEMS, SCIENCE AND TECHNOLOGY

(U) Trends in armed forces and the impact of scientific and technological innovation on those forces will remain a critical component of our analysis. Non-western armed forces will continue to show a declining trend in conventional weapon platform inventories, although many will incorporate add-on systems and upgrades to improve those that remain. Selected technological advances in some equipment

“Today’s military leaders cannot have scientific knowledge alone. They must be students of warfare with an imagination capable of projecting forward the principles of the past to the specific requirements of the future.”

General Maxwell D. Taylor
will improve capabilities and increase lethality. Unconventional and asymmetric approaches will be pursued as a cost effective and indirect method of opposing or defending against the U.S. and its allies. Chief among these methods will be the incorporation of missiles and WMD into a greater number of military arsenals. The use of space will increase exponentially both for commercial and security purposes. Impending changes and developments in science and technology will affect not only the way we live and work but also the way we conduct warfare.

**FUTURE WARFARE**

(U) The art and science of future conflict have come under increasing scrutiny in tandem with an uncertain future. The rapid pace of militarily significant technological advancement—particularly in the areas of information and communications—will continue. Major technological breakthroughs in military capability are likely in the next two decades. Some aspects of our technological dominance—especially those with commercial and industrial applications—will be difficult to maintain. We can expect our adversaries to develop and apply new or innovative forms of asymmetric and asynchronous warfare as they seek to advance their interests while avoiding direct military engagement with the United States on our terms.

(U) The idea that single events happen in isolation and can be dealt with in a singular manner is more unlikely to be true than ever. The global impact of technology, the integration of global systems, the blending of some cultures, the effect of long range weapons, and the emergence of a host of transnational threats have contributed to the “networked” world now evolving before our eyes. The future condition of our social order is likely to be challenged and threatened, not by a single event or opponent, but rather by the net effect of several (or even many) conditions and circumstances which, when combined, have much larger and more significant consequences than may be expected.

The net effect of the threats and challenges we face is the underlying theme of this primer.

**OUTLOOK**

(U) Taken together the information in this primer is indeed imposing and complex. This section provides an overview, and a brief look at key challenges, alternative forces, future concerns, and a snippet of history to contemplate. In the end, despite our many concerns, we live in the greatest nation on the face of the earth and our responsibilities are global. We have the opportunity to do much good.

"Change means the unknown... it means too many people cry insecurity. Nonsense! No one from the beginning of time has had security."

Eleanor Roosevelt
"The distant future is visible to the naked eye through the keyhole of history."
II. Introduction

Overview

(U) The pace and complexity of change in the global environment is staggering. Consequently, the U.S. Intelligence Community is faced with an extremely daunting challenge in assessing the most likely outcome of this dynamic environment. But the stakes of the Intelligence Community's efforts are no less than ensuring the safety and security of our nation and its citizens, as well as, more directly, the military personnel charged with their protection. The forecasts in this primer are dependent on several assumptions that are identified on page seven. The most significant of these are the assumptions that the U.S. will remain a global power and will exert its leadership globally. Consequently, accurately assessing the future threat is of critical importance to U.S. forces deployed around the globe.

(U) While many diverse challenges loom on the horizon, no global competitor on the scale of the former Soviet Union is expected to emerge in the near term. Additionally, many foreign militaries are in the process of scaling down their military services while enhancing the technological sophistication of their weapons. One result of this will be increased competition over innovative strategic technologies. While foreign militaries are in the process of completing this transition, a hiatus in the threat of major conflict is expected during the next ten years. For this reason, it is critical that U.S. military strategists and planners seize this strategic opportunity to posture the U.S. military against the future threat environment and potential adversaries that will exist in ten to twenty years.

"The purpose of forecasting is not to be right, but to avoid being surprised."

— Peter Bishop
The Responsibility of Intelligence

(U) The primary responsibility of intelligence is to assist in protecting the nation from surprise, whether by military, terror and crime, technological or economic means. The intelligence community accomplishes this by remaining alert to the changing world environment and evolving crises and by warning decision-makers of conditions and events that have national security implications. Intelligence and policy must evolve to accommodate the changes in this post-Cold War-techno-info era. Today's environment is not conducive to a static and set-piece warning process: we find ourselves simultaneously engaged in multiple states of peace, crisis, and war. The warning process must adapt to the uncertain and fluid, non-linear nature of the real world. It must become more contrarian and competitive to be most effective. Most important, it must become an integrated and agile system that discards the old paradigms and embraces many sources and ideas. Intelligence must look for the subtle hints and indicators that may be the only warning in an increasingly uncertain and unclear security environment. As the United States and its allies draw down their armed forces, intelligence must continue to "take point," as we tread cautiously into the future.

"Surprise is the greatest factor in war. There are two kinds, tactical and strategic. Tactical surprise is an operational art. A skilled unit commander can generally achieve it. Strategic surprise is attained on the political level."

— Tom Clancy

(U) The National Military Joint Intelligence Center is the hub of the DoD Indications and Warning system.
Assumptions

(U) The trends and projections presented in this primer are based in part on the following assumptions. If these are altered significantly, then it is reasonable to assume that a range of uncertain conditions could result.

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The United States:

Will remain a global power politically, economically, and militarily.

Will remain a democratic, free-market country, comprising its current territory.

Will continue to exert global leadership and remain the preferred security partner for the community of states that share American interests.

Through its leadership, will deter aggression, foster resolution of conflicts, and tackle global problems.

Will remain engaged worldwide, even in peacetime; American armed forces will maintain an overseas presence.


"Throughout history it has been the inaction of those who could have acted, the indifference of those who should have known better, the silence of the voice of justice when it mattered most, that has made it possible for evil to triumph."

— Emperor Haile Selassie
Force Protection Imperatives

(U) Assessing the nature and level of the threat is critical to the safety and effectiveness of U.S. military forces deployed around the globe. Determination of the security environment for U.S. access abroad, including short-term deployments and long-term basing, will be paramount.

(U) The United States has between 230,000-240,000 troops stationed or deployed in over 150 countries. Over 15,000 of these forces are deployed in peacemaking and peacekeeping missions. These numbers will decline somewhat over the next 10 years; however, the National Security Strategy requires engagement using all appropriate instruments of national power. Thus, the level of contact will likely increase.

(U) The 1996 bombing at Khobar Towers demonstrated the need for greater force protection efforts.

(U) U.S. Forces are deployed worldwide to over 150 countries.
Hiatus — A Strategic Opportunity

(U) Among other implications, the unitary nature of the threat from weapons and related technologies presented by the former Soviet Union has now transformed into a distributed set of potential threats, of which Russia is simply one. This new condition greatly complicates U.S. policies for technological control and containment, making the continued proliferation of advanced conventional weapons and weapons of mass destruction a certainty.

(U) Compared to the relatively stable bi-polar condition of the Cold War, the diversity of multi-polar challenges in this transition period has created an extremely complex threat environment. Simultaneously, political and economic conditions have produced a hiatus in medium/large scale conflict over the next ten years. Many countries are downsizing their military forces as they struggle with increasingly difficult domestic issues such as population growth, resource scarcity, and economic stagnation. As countries reduce the size of their armed forces, they will seek to maintain overall combat capability by obtaining innovative strategic technologies, thus improving the capability and lethality of their smaller forces. Military planners will have to make judicious choices, as reduced domestic procurement, declining foreign consumption, and other spending imperatives will limit many countries in their pursuit of advanced technology.

(U) These twin developments—increasing technological potential and constrained defense spending worldwide—make competition for certain advanced military technology, and for other limited and scarce capability, that much more intense. The global trend to have more sophisticated weaponry compensate for declining force strength is expected to continue for the next decade, thereby providing a strategic opportunity for U.S. planners and weapons developers to posture the U.S. military for the threat environment beyond 2010. By that time, the U.S. can expect possible regional adversaries, as well as coalitions and alliances of several countries, to challenge or threaten our interests. Various supranational groups could also pose a direct threat to U.S. national interests. In the near term, the one "wildcard" in this scenario is North Korea, which, given the right combination of circumstances, could produce a major theater war that would involve an enormous commitment of U.S. forces.

"I feel the responsibility of the occasion. Responsibility is proportionate to opportunity.”
— Woodrow Wilson
(U) While many new challenges are occurring today in the wake of the Cold War, these challenges are expected to become even more diverse and complex beyond the hiatus (2010-2020) addressed on the previous page. These challenges are not only represented by potential transnational threats, which will be addressed in more detail in the next chapter, but also by new economic, societal, and cultural paradigms whose impact are of a global scale. Several of the most prominent “global changes” are addressed below.

(U) **Global Village Phenomena:** As postulated by Marshall McLuhan, the global village has emerged from the post-industrial period. It is evolving into an information-technology-based social order with broad universal effect, reducing some points of economic and political disenfranchisement. State sponsorship of terrorism is expected to continue. Criminal cartels and their activities are likely to become more sophisticated and complex. They will further involve themselves in extensive legitimate covers for illicit business and will seek to influence directly, through infiltration and manipulation, all levels of government, transnational organizations, and businesses.

(U) **Terrorism And Rising Crime:** Motivations for terrorism will remain extreme nationalism, ethnic tensions, religion, and...
friction and conflict, while at the same time exacerbating others.

(U) **Economic Determinism And Demographic Tension:** Rising population and changing expectations combine with real resource shortfalls to impede progress and constrain productive growth. Conversely, in some cases, exceptional economic progress occurs. There is a growing division between the “haves” and “have-nots,” which is exacerbated in specific ways by technology.

(U) **Critical Uncertainties:** There are critical conditions extant, including the potential for large-scale environmental or natural disasters, pandemic disease, and revolutionary technological innovations, such as the advent of personal wearable communications and automation systems. These have changed and will change the social order and culture in fundamental ways. Iterations or waves of these changes and conditions will recur in the future.

(U) **Advanced Technology/Weapons Proliferation:** The acquisition of older technology by potential adversaries and their increased ability to adapt advanced technology and to use more advanced military systems is leading to an increased threat through technology proliferation. The proliferation of advanced conventional weapons and weapons of mass destruction (WMD) will lead to enhanced warfighting capabilities that further complicate U.S. contingency planning.

(U) **Cultural Societal Concerns:** A variety of cultural changes have had widespread effect on regional and global security conditions. Competing cultures and other societal phenomena combine to cause change in the social order. The rise of international personalities and the narrowing of popular culture are two of the many phenomena that are producing such change. English has become the lingua franca of the era. Common computer languages are also facilitating the blending of inter-societal relationships.

(U) **Multi-Polar Regional Power Centers:** In the years ahead, no state is expected to be able to match the worldwide strength and influence of the U.S. in terms of collective political, economic, technological, military, and cultural power. However, select nations will routinely exert influence within their own regions and retain unique capabilities to both assist and frustrate U.S. policies and interests.

(U) **Military-Civilian Estrangement:** Falling recruitment and retention, aversion to conscription, reductions in defense spending and attendant high cost of military modernization, the lack of personal recollection or experience with a major war or conflict, and the use of military forces to control domestic circumstances are fostering and shaping a generation that will come of age in the next ten years. Future leaders will have a significantly reduced defense establishment.

(U) **Diminished Effects of Time and Space:** Other trends include changes in the values of time and space brought about by improved communications and transportation, the rise of new regional power centers and alliances, and pressures from and for change on social and cultural circumstances, as well as on individual people.

(U) **Ethno-Linguistic Pan-Nationalism:** Groups with resurgent political identities are emerging along ethnocentric, theocratic, and...
linguistic lines that, in some cases, parallel tribal or ethnic divisions dating from antiquity. Often, these groups are in rebellion or opposition to artificially constructed political borders that divide cultures and peoples.

(U) **Political Deconfliction**: Global ubiquitous communications, rapid global transportation, and transnational mass media are facilitating diplomatic efforts to solve potential conflicts before they flare into significant violence. Conversely, in addition to shortening the decision cycle, when deconfliction fails in this environment, the resulting conflict is likely to be more difficult to solve than in the past.

(U) **Alliances And Supra-National Groups**: Future alliances and coalitions will be more flexible in their membership and less durable than they were during the Cold War era. Globally, an adversarial or competitive coalition, challenging or frustrating our own security interests and efforts over the next twenty years, is possible.

(U) **Sub-National Groups**: Coalitions may not necessarily be limited to states. Non-state groups could cooperate for common goals or objectives as well. The reemergence of city-states is also conceivable. The rise of sub-regions and districts as autonomous economic-political bodies will continue over the same period. The world will have increasingly transparent borders.

(U) **Renegade States**: A group of nations and transnational entities have engaged in activity that places them outside the commonly accepted international norms of behavior. Extreme violence, terror, and military or para-military force are frequently involved. In some cases, this phenomenon is associated with organized criminal groups that engage in acts that undermine governance.

(U) **Technology/Information Age**: Though power is not a finite resource, it is showing signs of a dynamism that is shifting focus to economics and technology as the chief venues for its exercise. Underscoring both will be the ability to quickly gather, exploit, and use information.

“Science and technology multiply around us. To an increasing extent they dictate the languages in which we speak and think. Either we use those languages, or we remain mute.”

— J. G. Ballard
III. Global Issues and Assessments

Overview

(U) In the post-Cold War era, the former Soviet Union and the bipolar nature of superpower competition have been replaced by a more diverse and multi-polar set of generalized entities and conflict conditions. Many of the trends influencing the future security environment can also be expected to extend beyond those of a strictly military nature. Some of these trends can have far greater influence than force capabilities and in many cases can take years to reveal their full impact on security. These global issues are evident throughout the world but often are largely manifested in developing regions such as Sub-Saharan Africa and Central Asia—regions where people and governments typically experience greater vulnerability to external forces.

(U) We should, therefore, anticipate an environment in which issues such as economic and political viability; demographic and resource stress; health and climate problems; and assorted challenges stemming from the proliferation of drugs, weapons, and technologies coexist, intertwine, and change seemingly at random. What is evident for the future is that all of these factors demonstrate a greater level of complexity. Some impacts appear to be instantaneous while others languish for generations. The threat of terrorism will remain a persistent problem, given the open nature of the United States as well as our presence throughout the world. The U.S., despite its prominence and leadership will witness an increasing challenge from various transnational groups, both legal and illegal, adding to the diplomatic and economic fray currently extant among nations over hundreds of seemingly insurmountable issues. The spread of diseases such as AIDS, the distribution of water, and the migration of people are but a few of the additional complex issues we face globally.

(U) The stress is already evident on the current security environment and quite possibly will worsen over the near term. During the foreseeable future, these broad and complex dangers will continue to represent a formidable barrier to the emergence of a stable, secure, and prosperous international order and will pose significant implications for U.S. military planning and force deployment. Thus, we must maintain focus across the spectrum of global issues.

"Stupendous issues are unfolding before our eyes, and we are only specks of dust that have settled in the night on the map of the world."
—Winston Churchill

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The Economic Environment

(U) Free-market economics will be embraced in various forms — not necessarily in congruence with the U.S. model — across much of the globe.

(U) Business and industry will continue a marked dynamism that will lead multinational corporations to become global — or true transnational — corporations. A mobile, global workforce, which is developing, will be the foundation. Regional economic blocs, or economic leagues, will emerge as a result of increased competition.

(U) Advancements in telecommunications and computing, which ushered in the information-technology era, will continue to change and evolve at a fast pace. Electronic commerce will become the standard for trade. Governments will see their span of control over the general population challenged. Individuals may see greater independence if governments fall behind.

(U) Information will be readily available — instantaneously — to most of the globe. By 2000, there will be approximately 200 million internet users worldwide, with the number of web sites doubling every 50 days. Difficulties will arise from “information overload” of unfiltered data. New conditions will compel us to question our concepts and beliefs. We will not be sure about what we see, hear, read, or sense in the future because information and technology will modify circumstances in radical ways. We will become a hyperculture acting in “technotime” and cyberspace more than real time and actual space. That is to say, time will become more relative to the speed and pace of technology.

“The most incomprehensible thing about the universe is that it is at all comprehensible.”

— Albert Einstein
(U) Shown are forecasts of total GNP using exchange rates and GNP based on purchasing power parity (PPP) for selected countries. Obviously, no economy will enjoy smooth uninterrupted growth — these forecasts are averaged over 20 years, rather than attempting to predict year-to-year performance.

(U) A major difficulty in comparing GNP between countries is how to convert currencies. Converting by currency exchange rates tends to underestimate economies that are not fully open and market-based, such as China’s, while exaggerating an economy like Japan’s with a strong currency and high domestic prices. They also depend heavily on the exchange rate chosen, and may not reflect underlying economic trends. Conversion based on purchasing power parity, on the other hand, may overstate the real strength of developing economies and is very problematic as a basis for long-range forecasts.

(U) China, for example, appears to be the world’s largest economy in 2020 by PPP, but small by exchange rate conversion. Each conversion shows part of the picture, but the truth is somewhere in between. In addition, China’s huge population ensures its per capita wealth will remain low, no matter how it is measured.

(U) Japan’s prospects depend on how it deals with the structural roots of its current crisis and with demographic shifts as its population ages over the next 20 years.
This forecast assumes full success in both efforts: failure will produce a much lower GNP for Japan by 2020.

(U) GNP forecasts for other key countries are summarized below, based on exchange rate conversion, in constant 1996 dollars, projected from World Bank 1996 figures and UN population forecasts.

Recent global financial crises have had a negative impact on global growth rate projections. For the near term, the rate of growth should average 2.15%, and beyond 2000, growth in real terms should average around 2.7%.
The Security Environment

NATION-STATE TRENDS

(U) States will continue to be the primary political entity, however, supranational groups will make their presence known and will play an increasing role in international decisionmaking. The reemergence of city-states is conceivable. The rise of sub regions and districts as autonomous economic-political bodies will continue over the same period. The world will have increasingly transparent borders.

Dissolution, Fragmentation, & Failure

(U) The nation-state will remain the primary institution of political identity. However, authority and allegiance increasingly are being challenged and eroded, resulting in more frequent instances of political dissolution and failed states.

- A failed state is one where the government is unable to function, and no effective state is left, as in the case of Somalia.

- Political dissolution or revolution may come about through a regime change, a change in the system of government, or political fragmentation, as with the Soviet Union, Yugoslavia, and Czechoslovakia.

(U) Pressure on the societal and governmental fabric of nation-states will grow over the next two decades. This pressure will come from above (through globalization of the world economy and transnational and multinational institutions) and from below (as reflected in the growing power and influence of regions, cities, subnational groups, and individuals).

(U) In the developed world, this changing condition raises the possibility that one or more advanced, modern states will weaken to the point where dissolution or secession may be the preferred political and economic solution. Though unlikely, some states may deteriorate to a point where they are unable to function, bringing on failure. Such an event could be profoundly destabilizing for a region and quite possibly the world.

(SAF) State failure will be more common in the developing world. In the future, demographic and resource infrastructure pressures—in concert with poor governance—will increase the likelihood of fragmentation. The economic interdependence that already exists worldwide has proven to be both a benefit and hindrance to state viability. Though not a given, economic failure could become a precursor to state failure. The collapse of some key "risk" states would have profound implications for the United States.

Perhaps the greatest challenge the U.S. faces is that in the exercise of great power the U.S. does not come to be viewed as arrogant and imperialistic and does not come to be the focus of the collective ire of the competing nations of the world.
Alliances And Coalition

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(U) Future alliances and coalitions will be more flexible in their memberships and even less durable than they were during the Cold War era.

One can imagine several possible alliances or coalitions that, if formed, would pose significant challenges to U.S. security interests.

Globally, a limited adversarial or competitive coalition, challenging or frustrating our own security interests and efforts, is possible during next 20 years. Such a coalition would not necessarily be limited to states; non-state groups could cooperate for common goals or objectives.

Supranational Institutions

(U) Of the emerging supranational institutions, the United Nations, International Monetary Fund (IMF), and World Bank exert the most influence on the United States. Correspondingly, the U.S. still has significant influence in all three institutions, although it is experiencing increased challenges to its position. Particularly in the UN, selected member states have become antagonistic over the perceived singularity of U.S. machinations on global and regional issues. In the IMF, European

(U) Boris Yeltsin and Jiang Zemin search for common ground to improve economic and political relations.

Union members have begun acting as a bloc with alternative solutions to U.S. supported plans to stem the wave of economic crises. These motions against or in contrast to U.S. policy in the various world institutions present no security threat in themselves, but do hamper U.S. influence in resolutions, treaties, conventions, and other decisions. One of the greatest detriments that can arise is from a UN Security Council decision — or indecision — that is out of step with U.S. security goals and objectives. The lack of overall IMF success in stemming the Russian economic crisis and the arrearage of U.S. UN dues have emboldened both friend and foe to buck U.S. leadership. Prolonged degradation of U.S. influence could damage long term perceptions of U.S. leadership.

(U) Some UN operations such as UNSCOM can become circumstantially integral to U.S. foreign policy.
Top 7 Designated Contributors to the UN

United States: 25**%
Japan: 17.98%
Germany: 9.63%
France: 6.49%
Italy: 5.39%
UK: 5.07%
Russia: 2.87%

1998 UN Operating Budget

$18 billion

Top 5 Contributors to IMF

United States: 18.25%
Japan: 5.67%
Germany: 5.67%
France: 5.10%
UK: 5.10%

1998 Total IMF Resources

$219 billion

*The U.S. Congress is the process of reducing this contribution to 20% as a contingent on releasing back payments to the UN.

Non-state Groups

(U) Non-state groups — particularly non-governmental organizations (NGOs) — have increased in number, are exerting more international influence, and are exhibiting greater transnational cooperation. The United Nations is increasingly relying on NGOs to assist in its economic, social, and security missions. As of 1998, more than 1,500 NGOs have UN consultative status, and at least another 26,000 are registered with the UN. The growing influence of non-state groups has both benefits and drawbacks. Many of these groups can fill needs where governments fail short, but their presence in a given area or circumstance has sometimes increased the complexity of the geopolitical environment. In future security environments, they will be useful in providing humanitarian infrastructure and information to facilitate peacemaking operations, thus allowing military personnel to focus on security and peace enforcement.

(U) IMF Director Michel Camdessus of France has been directly involved in international economics since 1966. From the Andes to Zambia, Camdessus has wielded the financial clout and savvy of the IMF. As a globalist, he continues to stress the need for a united international effort to make the global economy function better while at the same time frustrating national agendas — such as in Russia — with perceived “heavy-handedness.”

“If everyone contemplates the infinite instead of fixing the drains, many of us will die of cholera.” — John Rich

(U) International organizations such as the Red Crescent have increasing influence on U.S. decisions concerning Operations Other Than War (OOTW)/Peacekeeping operations.

(U) The changing economic environment, the evolving role of the nation-state, and the growing influence of supranational institutions and non-state groups are all factors contributing to the development of a new security paradigm.
THE NEW SECURITY PARADIGM

(U) The past ten years have been marked by dynamic change and great uncertainty. The next decade is likely to be equally so because the basic engines of turmoil remain essentially unchanged. The volatile mix of global, political, economic, social, technological, and military conditions will continue to bring stress to the international order. No condition, circumstance, or power is likely to emerge over the next 10-20 years that will somehow transcend these "sources of instability" and lead to a more stable global order.

Categories of the New Paradigm

(U) During the next two decades, these new challenges will bring about the evolution of a new security paradigm—one in which the United States faces a generalized set of partners, competitors, and potential adversaries.
Cooperative partners: These are states that generally share U.S. values and interests and can be viewed as military allies.

Non-compliant Competitors: States that generally do not conform to U.S. values and interests but are not military adversaries. They do not engage in direct violence against U.S. interests, but may engage in policies or acts that compromise or endanger U.S. goals and objectives.

Renegades: States that conform to values and interests that are contrary to those of the U.S., but lack the economic or military wherewithal to actively oppose the U.S.

Adversaries: States that engage in unacceptable behavior, frequently involving military force and violence. These states constitute current or potential enemies against whom the U.S. must consider the use of military force.

(U) The system generated by this new paradigm is dynamic, and the states within it are in constant interaction. The categories of the paradigm themselves are fluid and in some cases not mutually exclusive. At any particular moment a state may be a compliant partner and a non-compliant competitor circumstantially. Although it is not possible for a state to be a renegade or adversary and simultaneously to be anything else, it is possible to move from renegade/adversary status to something less confrontational over time. Similarly, the environment in which these states interact fluctuates constantly. The evolving community of nations will influence the actions of individual states and also be influenced by them, and at any time emergency conditions could have a profound impact on the interactive dynamic of the system.

(UNCLASSIFIED) The U.S. is working closely with former Soviet satellites and republics such as Lithuania, incorporating them more into an evolving European security architecture.

"Let us never negotiate out of fear. But let us never fear to negotiate."
— John F. Kennedy
Inaugural Address

(U) New recruits conduct drill at an unidentified Hamas training camp.
SIMULTANEITY

(U) The dynamic and uncertain nature of the emerging security paradigm makes the idea that single events will happen in isolation and can be dealt with in a singular manner more unlikely than ever. It is likely that several separate events or critical conditions will occur simultaneously, and the effect of their simultaneous occurrence will be compounded and magnified.

(U) Anticipating a threat environment in which there will be multiple situations requiring a direct military response is critical to contingency and operational planning. The global engagement posture of the U.S. military on any given day already limits the forces available to respond immediately to any new crisis. Folding these limitations into crisis and operational planning will be crucial to ensure that those plans are both realistic and achievable, and could have an impact on our overall force structure in the future.

(U) Further exacerbating this problem, the global impact of technology, the integration of economic systems, the blending of some cultures, the effect of long range weapons, and a host of transnational issues have contributed to a “networked” world we see evolving before our eyes. The networked effect of several (or even many) conditions and circumstances will compound the problem of simultaneity, producing far greater and more significant consequences.

UNCLASSIFIED

The cumulative effect of several small conflicts and crisis conditions could approximate a large war effect...

It is Unrealistic to Expect That Single Events Will Happen in Isolation From Other Events

Global mobility and force structure adaptability are key facets of the U.S./Allied response mechanism.
(U) There is little chance the United States will confront a Soviet-like global military challenge during the next 20 years. Nevertheless, threats and threatening conditions exist today, and others will emerge over time. Many of these threats will transcend national boundaries; thus their occurrence will have transnational, and often global, implications. A representative sample of such threats and conditions (by no means an all-inclusive list), is depicted in the above graphic. Most of these issues will be addressed in detail in the following section. Those issues that more directly relate to future conflict, such as information warfare and conventional conflict, will be addressed in Chapter VI.

"There is no independent variable upon which all other variables depend. There are only interrelated variables, boundless in complexity. Faced with this maze of causal influences, unable even to trace all their interactions, the most we can do is focus on those that seem most revealing for our purposes and recognize the distortion implicit in that choice."

— Alvin Toffler
(U) By the year 2000, the global population will just exceed 6 billion. The population is expected to rise to about 7.6 billion by 2020. About 20% of the increase will occur in India and China, which together will account for about 35% of the world’s population. Birth control practices will begin to show their impact in China. India, with an apparently ineffective program in place, will continue to see its population spiral upward. Some 95% of the Earth’s population growth is expected to take place in the poorer nations. Only 5% will occur in the developed world, while negative growth is expected for Europe, Russia and Japan. Rapid population growth will exacerbate already difficult conditions in many parts of the developing world, leading to more instability. Longevity in the developed world will lead to yet another set of social problems—from inadequate medical care to aging workforces. The need for replacement workers will play an increasing part in future decisions on immigration policies in North America and Europe.

**Most Populated Countries**

<table>
<thead>
<tr>
<th>2000</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) China: 1.3 billion</td>
<td>1) China: 1.4 billion</td>
</tr>
<tr>
<td>2) India: 1 billion</td>
<td>2) India: 1.2 billion</td>
</tr>
<tr>
<td>3) United States: 278 million</td>
<td>3) United States: 322 million</td>
</tr>
<tr>
<td>4) Indonesia: 213 million</td>
<td>4) Indonesia: 264 million</td>
</tr>
<tr>
<td>5) Brazil: 169 million</td>
<td>5) Pakistan: 248 million</td>
</tr>
<tr>
<td>6) Pakistan: 156 million</td>
<td>6) Nigeria: 215 million</td>
</tr>
<tr>
<td>7) Russia: 146 million</td>
<td>7) Brazil: 208 million</td>
</tr>
<tr>
<td>8) Nigeria: 129 million</td>
<td>8) Bangladesh: 171 million</td>
</tr>
<tr>
<td>9) Bangladesh: 128 million</td>
<td>9) Russia: 135 million</td>
</tr>
<tr>
<td>10) Japan: 126 million</td>
<td>10) Mexico: 125 million</td>
</tr>
</tbody>
</table>

*(U) This population figure does not take into full account the anticipated deaths brought about by AIDS (see HEALTH ISSUES) or the potential impact of the growing trend in infertility in some regions. These factors could reduce the 2020 global population forecast by about 1%*
(U) By 2020, over half of the world’s population will live in urban areas. This growing urbanization will have a significant impact in the developing world, where infrastructure is easily stressed. More and more, the fate of cities will determine the fate of nations and regions. Each year some 20-30 million of the world’s poorest people move from rural to urban zones, including the Third World’s “megacities.” These high rates of urbanization mean that future warfare is more likely than in the past to occur in urban areas. It also means that health and sanitation infrastructures may be overwhelmed, leading to increased infectious and chronic disease. These conditions reduce productivity and retard national development.
RESOURCE SCARCITY

There is no clear indication of long-term crisis in the supply of any critical resource, but temporary and localized shortages and distribution problems may cause instability and conflict.

(U) Moves by individual nations to control fresh water supplies already contribute to regional tensions. Future conflicts are increasingly likely as population growth and improving living standards increase the demand for fresh water.

(U) The worldwide demand for fish has been rising steadily, with security implications for nations that depend on this finite but renewable resource. Worldwide, 13 of the 17 principal fishing zones are depleted or in steep decline. Unless properly managed, problems over fisheries are expected to worsen in the future because of intense competition among fishing fleets and fishing nations. The demand for meats and cereals will also rise and strain production and distribution systems, particularly in the developing world. The leveling off of grain yields, water depletion and population growth will exacerbate the problem. By 2020, the developing world will be consuming roughly 60% of the world’s meat supplies. The challenge will be in maintaining timely distribution without significant long term disruption.

(U) Strategic minerals and energy resources present yet another problem with national security overtones. The concentration of key resources in unstable regions, such as the Persian Gulf, the Caucasus, and Central and West Africa, will be of great economic and political concern. High dependence on a region such as the Gulf will make the world economy vulnerable to temporary political-military shocks.

(U) It is reasonable to assume that some deficiencies in global resources will be overcome by new or advanced technologies as well as refinements in agricultural practices. Industry and science are constantly exploring more efficient ways to extract and utilize existing resources. But resource solutions are often expensive, technologically challenging, difficult, and time-consuming to implement. Thus, local and regional resource scarcities will remain a problem well into the future.

HEALTH ISSUES

(U) Globally, health care availability and accessibility are unevenly distributed and will remain so. Industrialized countries enjoy the highest standards of health care ever, while many developing countries are unable to meet even the most basic health needs of their citizenry. Health care delivery in developing countries will not improve appreciably and, in many cases, will deteriorate further because of at least one of the following:
- Poor economies
- Extremely low per capita health care expenditures
- Inadequate health care infrastructure, including low-quality personnel, and poor organization and health care facilities
- Lack of political will to make significant change
- Overwhelming morbidity and mortality from endemic and epidemic infectious diseases

**Infectious Diseases**

(U) Complacency toward infectious diseases has emerged from two false assumptions: that microbes were biologically stationary targets and that diseases would remain geographically sequestered. The current and likely future epidemiological situations show the fallacy of those assumptions. Of the estimated 52 million deaths in 1997, infectious diseases led all categories of death, killing at least 17 million people. At least 29 previously unknown diseases have appeared globally since 1973, and 20 well-known ones have re-emerged, often with new drug resistance or in deadlier forms.

(U) These emerging pathogens generally are not newly evolved, but became newly recognized or spread into populations because of changes in commerce, culture, environment, religion, technology, and the globalization of humans/animals/products.

(U) Emerging and re-emerging infectious diseases are more universally recognized as at least variables in, if not outright threats to, global and national security. Humanitarian situations requiring U.S. and coalition military intervention will escalate, placing deployed forces at increased risk of infectious diseases when supporting complex contingency operations in developing nations.

**1997 Global Deaths by Infectious Disease and Method of Transmission**

- 35 million (All Other Deaths)
- 17 million (Infectious Disease Deaths)
- Person-to-person
- Insect Borne
- Animal Borne
- Food, Water, Soil Borne
AIDS in the 21st Century

(U) At least 30 million people are now infected with Human Immunodeficiency Virus (HIV) worldwide; unless a cure is found, most will die within the next 5-10 years.

- Most (21 million) of the infected are in Sub-Saharan Africa.
- Since the start of the Acquired Immunodeficiency Syndrome (AIDS) pandemic in 1981, over 12 million people have died.
- Tuberculosis co-infection will continue to account for at least one-third of the deaths.
- Effective national public health education programs in Thailand and Uganda have demonstrated that by changing human behavior, HIV incidence can be slowed and perhaps reversed.

(U) Worldwide, the number of people with HIV/AIDS will continue to increase for at least another decade, to upwards of 60 million. HIV/AIDS will be controlled in industrialized countries because of affordable therapy and effective public education programs. In developing countries, however, the problem posed by AIDS will be far worse. South and Southeast Asia will experience an explosion in HIV infections (20-30 million) in the next 10 years with most dying in the following 10 years. Ukraine and Belarus are headed for severe AIDS epidemics, and Russia may soon follow. HIV infection in Sub-Saharan Africa will stabilize at 20-30 million but will remain an economic and societal millstone. Sub-Saharan Africa could lose more than 60 million people by 2015. South Africa, having undergone reported HIV/AIDS in its black population, is now confronted with a problem as severe as that of most of Sub-Saharan Africa.

(U) Zimbabwe provides a disturbing example:
- Over 30% of the general population is HIV infected.
- High-risk urban and rural populations are 86% and 72% HIV positive, respectively.
- AIDS has reduced life expectancy from 60 to 40 years — about the same as it was for Africa in the mid-1950s.
- Life expectancy may be further reduced in the next 5 years.

(U) The cycle of inadequate health care and acute disease, combined with increasing population and high population density, malnutrition and under-nutrition, and emerging and re-emerging infectious diseases, will continue to help generate societal instability with consequent humanitarian situations, possibly resulting in U.S. or coalition military intervention. Widespread infectious disease in the developing world will also place U.S. and coalition forces at increased risk when participating in contingency operations in underdeveloped countries. Third World military participation and medical readiness will have significant implications for coalition operations.

Non-Infectious Diseases

(U) Urbanization, climatic change, poor food and water quality, poor to nonexistent sanitation systems, and low hygiene standards will contribute to an increased worldwide incidence of infectious disease. Poorly controlled industrialization in developing countries will result in acute and chronic non-infectious diseases resulting from exposure to chemicals, including heavy metals that pollute air, water, soil and/or food. Such diseases may not only affect the indigenous and transnational populace, but also troops deploying to such areas, and the population of countries that import contaminated foods as a result of the globalization of food supplies. Con-
continued shipment of chemical and radiological waste materials from industrialized nations to developing countries will exacerbate existing problems. Solutions to these challenges will not see fruition for the foreseeable future as resource priorities will center on "quick fixes" and sustaining economic productivity.

(U) Heavy snow in Kosovo hampered monitoring of the growing crisis and placed limitations on the level of hostilities and violence that had occurred during warmer weather.

THE ENVIRONMENT

(U) The impact that humans are having on the environment and climate is quite apparent, particularly in the developing regions where deforestation, desertification, and industrialization are the leading ill effects. Additionally, the decline in the number of plants and animal species has implications for human health and diet. The long-term consequences from damage to ecosystems are still unknown, but such changes ultimately can contribute to instability or conflict. Future military operations may include interdiction to halt the destruction of a particular ecosystem or a response to environmental terrorism, such as the Iraqis setting fire to numerous oil wells during their withdrawal from Kuwait in 1991. Naturally occurring weather patterns and natural disasters also can have significant security implications. A military response to a natural disaster with man-made ancillary effects, such as securing and controlling an earthquake-damaged nuclear reactor, must also be anticipated.

Global Warming

(U) Although observed changes in global climate are not yet sufficient in magnitude to be attributed to anthropogenic increases in

Life Science Technologies

(U) Biotechnological advances will continue to revolutionize medical and pharmaceutical industries. One area of progress will be the development of new approaches and products for diagnosing, treating, and preventing infectious and non-infectious diseases. Only the civilian and military sectors of industrialized countries can afford most of the products so far marketed. This has improved civilian health care and medical readiness in the industrialized world but has done little to improve health in developing regions. This trend will not change soon.

(U) Pollution in developing countries is a significant factor in increasing instances of non-infectious diseases.

”Hyperbole is a characteristic of the information age. What starts as a little story is suddenly all over the news and the Internet. Information feeds on itself, and this is true for the weather.”

— Stu Ostro
The Weather Channel meteorology supervisor
UNCLASSIFIED

Climate Changes

Global surface temperatures could rise 1.8 to 6.3 degrees Fahrenheit by 2100.

Extreme weather events, from hurricanes to droughts, could become more frequent and more severe.

Prolonged temperature anomalies could foster crop production in some regions but dry out or chill important growing regions particularly in the United States.

Tropical diseases and pests may transit into formerly cooler environs.

(Source: EPA)

(U) Chinese troop support during floods.

Greenhouse gases, the effects of global warming must not be discounted. The potential for impact on global temperatures, precipitation, storm patterns, and sea levels could alter agriculture, water supplies, physiological and mental health, related infrastructures, and the security environment.

(U) The rate of sea level rise has increased steadily since 1650, with strong acceleration at the end of the 19th century. This increased rate of rise may or may not correlate with global warming. Still, there are implications for the developing world where large portions of the population reside in urban centers in coastal and delta regions. The challenge will be for governments in these regions to respond effectively with limited resources to natural and humanitarian disasters.

Weather Patterns and Natural Disasters

(U) Cyclical changes in climate have direct and indirect implications for states and regions. Floods and prolonged droughts pose serious threats to public health and security and can lead to significant economic losses. In unstable regions, such conditions can further stress governments and infrastructures. The 1997 forest fires in Indonesia contributed to the unrest brought on by the 1998 economic crisis, which has continued into 1999. Severe weather also can have significant short and long-term security implications and, therefore, merit forecasting and incorporating into intelligence estimates. The major agricultural areas of eastern Ukraine and southern Russia were unfavorably dry in mid-1998, and late wet weather hampered the harvesting of the limited crops. Given the Russian economic crisis and the limited food stores, harsh weather in subsequent years could prove disastrous. Long-term meteorological forecasting remains somewhat undependable but still prudent for military and political planning. Projected advances in instrumentation, methodology, and processing of atmospheric and related data will improve these forecasts and make them more relevant in the analytical process.

(U) In the next 20 years, a number of climate-related natural disasters will occur that will result in the need for military support operations. Examples are the 1997 forest fires in Indonesia and the devastation wrought on Central America by Hurricane Mitch in 1998. Because of the breadth and depth of its logistics and support capabilities, the U.S. military will continue to be used as a primary response mechanism. It is also conceivable that, in the next 20 years, U.S. armed forces will have to respond to one of these disasters under non-permissive conditions.
MIGRANTS — REFUGEES — DISPLACED PERSONS

(U) Over the past three years, the number of persons of concern to the UNHCR (UN High Commissioner for Refugees) has dropped worldwide to just over 22 million. This is down from a record high of 27 million in 1995. Including the UNHCR persons of concern, there are currently an estimated 50 million people who have been forced from their homes around the world. There have been notable increases in portions of Africa, Europe, and North America. During the next 20 years, the continuing disparity between rich and poor countries; rising nationalism; the fragmentation of existing states; ethnic, religious, political, and tribal strife; natural disasters; and the formation of competing entities will generate new flows of migrants, refugees, and internally displaced persons. Humanitarian emergencies will remain a common feature of the international security environment.

(U) During the next 20 years, migration from developing countries to industrialized countries will increase. Developing countries have seen record increases in the working-age population, while at the same time western industrialized states have shown a decline in the same age group. This incongruity, coupled with the widening economic gap between the least developed and the industrialized countries, has fueled the rise in migration—both legal and illegal. This migration will challenge decisionmakers and stress economic and political infrastructures.

(U) For at least the next two decades, Europe will face migration problems from the south and southeast. By the end of 1997, the Netherlands — with a population under 16 million — experienced more than a 50% increase in refugees applying for asylum over the previous year. Over 64,000 refugees sought sanctuary, including 34,000 asylum seekers, forcing the Dutch government to enact greater immigration controls. During the same year, the crisis in Albania resulted in 17,000 refugees fleeing to Italy. Partly as a result, Italy took a leading role in peace operations in Albania. Germany has by far the largest number of refugees in Europe with over 277,000. The majority of these have found their way north from the Balkans. Consequently, Germany has taken an active role in the monitoring and management of the Balkan refugee issue.

(U) New and rekindled conflicts in Africa during 1998 kept the numbers of persons of concern high. At least a million people are displaced in Angola, with over 150,000 additions since mid-1997. The border dispute and associated conflict between Ethiopia and Eritrea have left an estimated 250,000 people displaced. Ethiopia already has a large refugee population of about 300,000, consisting mostly of Somalis and Sudanese. The big problem area on the continent remains Sudan. Approximately 365,000 refugees make their interim home

(U) Makeshift homes such as these have become integral to the landscape in many parts of Africa and are indicative of the persistence of demographic strains on the continent.

(U) Fleeing Kosovar villagers.

Persons of concern include refugees, returnees, asylum seekers, internally displaced persons, war-affected populations, and persons unable to obtain nationality (affects individuals from some of the newly formed states of the former Soviet Union).
there, while almost 4 million Sudanese are internally displaced. Even if the tide of crisis-induced migration is stopped, at best it will take at least the next decade to settle or repatriate the multitudes.

(U) Adding to its mounting problems, Russia too must cope with a sizeable refugee population of about 324,000, of which Moscow is host to the largest number—about 100,000. This has increased tension in the city, as most Muscovites remain highly xenophobic. When combined with deteriorating economic conditions, the refugee situation provides fodder for civil unrest.

(U) In the Middle East, population growth, economic disparity, and water distribution shortfalls will further accelerate migration and compound socio-political problems. The issue of the Palestinians refugees poses a significant challenge to the Middle East with 2 million currently living in Lebanon, Syria, and Jordan. This population could approach 6 million by 2020. The problem is most acute in Lebanon, where there is little chance of assimilation and government control is nearly absent in the refugee camps. A single Palestinian state would not be able to accept consolidation of all Palestinians. However, significant numbers would attempt to return, creating a potential destabilizing factor for the region.  

(U) In Latin America, there are several areas where persons of concern represent an increasing source of intrastate and interstate distress. Colombia, Peru, and Guatemala account for about 1.6 million internally displaced persons, while Mexico and Costa Rica combined play host to over 50,000 refugees. Natural disasters such as Hurricane Mitch of late 1998 will easily drive this number higher.

(U) The lure of prosperity will continue to inspire millions to migrate to the United States from around the world well into the next century. Additionally, those who have fled their native lands because of war, civil conflict, or persecution are drawn by the perceived opportunity afforded by the United States where approximately 500,000 refugees have sought sanctuary.

(C) The unique capabilities of the U.S. military — strategic lift, global deployment and sustainment, etc. — will remain in high demand as the international community seeks to cope with these trends. Sudden waves of human movement are likely in the coming years because of the socio-cultural, political, and economic dynamics currently in play across much of the globe. Candidates for new, large-scale refugee waves in the approaching years include Mexico, Colombia, Cuba, most of Central America, Algeria, Central and West Africa, the Caucasus, and Central Asia.

By the spring of 1999, the conflict in Kosovo displaced over a million inhabitants, and nearly 600,000 of these fled into neighboring countries.

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### 1998 World Refugee Totals

<table>
<thead>
<tr>
<th>Region</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle East</td>
<td>5.7 million</td>
</tr>
<tr>
<td>Africa</td>
<td>2.9 million</td>
</tr>
<tr>
<td>South/Central Asia</td>
<td>1.7 million</td>
</tr>
<tr>
<td>Europe</td>
<td>1.2 million</td>
</tr>
<tr>
<td>FSU</td>
<td>0.9 million</td>
</tr>
<tr>
<td>The Americas/Caribbean</td>
<td>0.6 million</td>
</tr>
<tr>
<td>East Asia/Pacific</td>
<td>0.5 million</td>
</tr>
</tbody>
</table>

### 1998 Top Ten Internally Displaced Person (IDP) Populations

<table>
<thead>
<tr>
<th>Country</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sudan</td>
<td>4.0 million</td>
</tr>
<tr>
<td>Angola</td>
<td>1.2 million*</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>1.2 million</td>
</tr>
<tr>
<td>Colombia</td>
<td>1.0 million</td>
</tr>
<tr>
<td>Turkey</td>
<td>1.0 million*</td>
</tr>
<tr>
<td>Iraq</td>
<td>0.9 million</td>
</tr>
<tr>
<td>Bosnia</td>
<td>0.8 million</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>0.8 million</td>
</tr>
<tr>
<td>Burma</td>
<td>0.7 million*</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>0.5 million</td>
</tr>
</tbody>
</table>

(Source: UN)
Five Largest Refugee Groups in 1998

**Refugee Sources**
- Afghanistan — 2.6 million
- Iraq — 0.6 million
- Bosnia — 0.6 million
- Somalia — 0.5 million
- Burundi — 0.5 million

**Refugee Recipients**
- Iran, Pakistan, India, Western Europe
- Iran, Syria, Saudi Arabia, Western Europe
- Germany, Yugoslavia, Croatia, Austria, Sweden, Switzerland
- Ethiopia, Kenya, Yemen, Djibouti, Western Europe
- Tanzania, D.R.O.C., Rwanda, Zambia

(Source: UN)
ORGANIZED CRIME

The global threat from organized crime continues to increase. Criminal cartels and their activities are likely to become more sophisticated and complex. They will further involve themselves in extensive legitimate covers for illicit business and will seek to directly influence, through infiltration and manipulation, all levels of government, transnational organizations, and businesses. There is limited but intriguing evidence of collaboration among independent groups. This cooperation could extend to terrorist groups as well. In economically and politically unstable countries, organized criminals gain greater access by circumventing or subverting weakened security infrastructures and infiltrating governments. This increased presence and corresponding corruption and debilitation of legitimate governance can easily affect the fragile nature of the state. Russian organized crime groups have established a presence in Eurasia, Eastern Europe, and the U.S., often using former Soviet connections to conduct business ventures. These groups — and similar groups globally — are inclined to “keep the host alive.” They also tend to resist internal and external efforts at economic and political reform. Military operations could be undermined when carried out in areas under the influence of organized crime. During the UN Somalia mission of 1993, Somali groups made use of UN temporary employment and infrastructure to conduct illicit business. The smuggling of arms into the Balkans by European groups has added yet another security concern for ongoing peacekeeping operations. The challenge of organized crime will increasingly require cooperation among U.S. military, law enforcement, and intelligence services.

ILLEGAL DRUG TRADE

(U) New drugs and drug products, expanding markets, and new methods of production will continually alter illegal drug trafficking patterns.

(U) Powerful international drug trafficking organizations will continue to pose a serious threat to U.S. national security. Drug trafficking and consumption will continue to threaten our social order and the democratic institutions and social well-being of
our global partners. The illegal drug trade kills and sickens, drains economies, threatens the environment, and undermines democratic institutions and international order.

(U) The national security threat posed by traffickers is becoming more complex and diverse as the international drug trade becomes increasingly fluid and sophisticated. International criminal syndicates will take advantage of rapid advancements in global communications, transportation, and finance to more efficiently conduct their business.

(U) Throughout the world, powerful drug trafficking cartels act with near impunity, many seizing and maintaining their power through bribery, coercion, threats, intimidation, and murder directed against elected office holders, members of the judicial system, law enforcement officials, military personnel and journalists.

(U) Narco-trafficking is a significant funding source for criminal and insurgent groups.

Drug-related corruption will reach epidemic levels in certain countries; this may require a more direct response from the United States to protect our national security. The hemispheric commitment to respect the rule of law, human rights, and the principles of sovereignty and democratic rule will be under attack from the drug kingpins.

TERRORISM
Regional Outlook

International terrorism is expected to remain a problem through 2020. Motivations for terrorism will remain extreme nationalism, ethnic tensions, religious differences, and economic and political disenfranchisement; limited state sponsorship is expected to continue. The prominent U.S. role in international counter-terrorism will ensure that our interests will remain a primary target for terrorism.

Middle Eastern terrorism will remain the primary terrorist threat to the United States through 2020. State sponsors of terrorism will continue to use it as an element of foreign policy but generally in a covert manner, to escape political or military retaliation. Terrorist groups are expected to tend toward independence from state sponsors and seek support from non-state sponsors such as Usama Bin Ladin in Afghanistan. Middle Eastern terrorists will continue to export terrorism worldwide, particularly to Europe and Africa.

European terrorism will remain focused on flashpoints generated by political, religious or cultural differences in Europe. We expect ethnic differences to be a primary motivating factor as eastern Europe (especially the former Soviet Union) resolves its borders. Vestiges of leftist organizations may survive until 2020 but only if the governments they oppose are unable to provide for their population.

Latin America will continue to host two sources of terrorism — that generated by those who oppose Latin American

“Terrorism has become the systemic weapon of a war that knows no borders or seldom has a face.”
— Jacques Chirac
Long Term Outlook

New developments in technology will be used primarily to improve methods of delivery or concealment of terrorist weapons. The emphasis will be on simplicity, effectiveness and limited risk to the terrorist, his organization or sponsor. Terrorists increasingly will use information operations to collect intelligence and potentially to attack infrastructure.

Asian terrorism will be rooted in religious extremism and ethnic differences. In some cases, governments will use terrorists or insurgents to further territorial goals in neighboring countries. Unstable countries like Afghanistan will provide safe havens for extremist and terrorist groups.

African terrorism in general will be generated by ethnic differences and will be a subset of insurgencies or separatism. Transnational terrorist organizations will find Africa a favorable environment in which to operate, as poor security and unstable governments persist.

WMD PROLIFERATION

(U) Proliferation by adversaries and non-compliant partners will lead to enhanced warfighting capabilities that will complicate U.S. contingency planning. U.S. forces may have to engage in warfare in which advanced
III. Global Issues and Assessments

Transnational Issues

conventional weapons and WMD are used directly against U.S. forces, and on access and embarkation points. Conflict between other nations or groups in which such weapons are used may also affect subsequent U.S. involvement.

Chemical/Biological Weapons (CBW)

(U) The 1972 Biological and Toxin Weapons Convention (BWC) remains in place, and the Chemical Weapons Convention (CWC), which entered into force in April 1997, is gaining wide acceptance. Nevertheless, some countries will maintain covert chemical and biological warfare capabilities. Many countries possess the infrastructure to develop chemical and biological weapons, and those lacking an indigenous capability can purchase it. Furthermore, chemical and biological warfare programs can be concealed within legitimate dual-use R&D and industrial operations.

(U) Agents such as sarin and mustard, now the mainstay of chemical warfare arsenals, will continue to be a threat in the near term, and the persistent nerve agent VX will enter the operational inventories of more countries as their programs mature. An increasing number of countries with biological warfare programs will be able to develop infectious agents such as anthrax and plague, as well as toxins such as botulinum and ricin, for weaponization. U.S. forces, deployed in either military or peacekeeping roles, could be exposed to these agents.

(S/NF) Many of the components needed for chemical or biological agent weaponization are used in other types of weapon systems, many of which are available in the international arms market. Chemical and biological agents can be disseminated by tube and rocket artillery, ground and naval mines, aerial bombs, submunition dispensers for aircraft, and a wide variety of spray devices. An increasing number of countries are also capable of employing unmanned aerial vehicles, cruise missiles, and ballistic missiles for chemical and biological attack. Terrorist use should also be anticipated, primarily in improvised devices, probably in association with an explosive.

(U) Chemical and biological agent threats also can derive from sources other than conventional armed forces of hostile states. The nature of agent dissemination devices is such that special operations forces and terrorist groups can use chemical and biological agents

(U) The proliferation of WMD increases the probability that armed conflict or a terrorist attack will have a CW/BW component.
in ways that could have a major impact on national security and warfighting capabilities. The technology required to disseminate agents using aircraft, trucks, small boats, or man-portable devices is readily obtainable in the form of agricultural sprayers and similar forms of equipment. Improvised devices are also likely to be used for agent dissemination.

**Nuclear**

The proliferation of nuclear weapons and nuclear technology poses a particularly grave threat. A related problem involves unsafe nuclear technology of all types, including that used for peaceful purposes, as well as the improper security and handling of nuclear materials that are dangerous in their natural or processed form. The threat will grow as more nuclear technology is used. Several factors, including international counter-proliferation agreements, general public/political opposition, and the fact that nuclear weapons technology is expensive and difficult to obtain, will preclude the widespread proliferation of nuclear weapons. Nevertheless, the number of countries acquiring nuclear weapon technology and materials will slowly increase into the next century.

(U) Indian Shakti-3 nuclear test site.

Biggest problem: Chemical and biological capabilities used by subnational groups that are not easily deterred or identified.

Growing Threat: Tactical Operations and Terrorism
Advanced Conventional Weapons

Through the next two decades the limited capability of most states to develop and produce high-tech systems will force them to purchase their advanced weaponry abroad. The high price of these items will limit quantities, but in most cases it is the lethality or perceived advantage the advanced weapon can provide for the end users that will promote sales. Countries that cannot afford complete systems will tend to pursue niche capabilities or selected improvements. This hybridization often will make use of Western electronics and subsystems on older platforms. Ultimately, however, acquiring and incorporating advanced conventional weapons systems and sub-systems will be of less importance than possessing the skill and knowledge to effectively employ and sustain them in operational settings.

ADVANCED TECHNOLOGY

(U) As the speed of technological innovation and implementation increases, the availability of older generation technology to developing countries will increase. Countries with advanced technology will not be able to maintain export controls on older technology in the face of economic and business pressures. Older technology will be very useful to developing countries for both traditional and novel developments in military systems and weapons. Additionally, technology will continue to lose the distinction of being either exclusively for military or exclusively for civilian use. Therefore, even the proliferation of older “dual-use” technology will lead to an increased threat, given the ability to adapt that technology into military systems. This threat is further compounded if commercially
available advanced technology can be incorporated into the system as well.

(U) In part, because of technology proliferation, we may become more vulnerable considering our dependence on automation and telecommunications. The key to maintaining our technological dominance is to pursue systemic technological advancements that are integrated and employed more effectively than those of our adversaries. Several countries will develop the infrastructure to use new technologies for military systems. Industrially funded R&D will play a larger role in the development of new technologies for military applications. The U.S. will face competitors and adversaries with selected high tech capabilities, with Japan and Germany leading in selected niche technologies. However, the U.S. is not likely to face a high technology peer through 2020.

**Technology Proliferation**

(U) Technological development and innovation continues at a phenomenal rate, in many cases in areas that have direct military application. The proliferation of this technology has significant national security implications for the U.S. Some of the more troubling areas are listed below:

- Computer speed, secure operations, and very advanced system configurations
- Communication speed — very high data rate communications
- Advanced electronics, photonics and neural networking
- Transportation advancements
- Remote and autonomous control systems (robotics)
- Smart materials
- Warfare modeling and simulation and synthetic environments
- Ultra short pulse (time frequency) sensors at RF applications
- Integrated microsystems, micro-electromechanical systems (MEMS), micro-engineering, nanotechnologies
- Biotechnologies

(U) Exploratory French Transport
Critical Uncertainties

(U) Critical uncertainties abound. Uncertainty about the future is even greater than it was a decade or more ago, when the Cold War and the bipolar international environment seemed to provide a set of parameters by which to gauge future developments. A small sample of the more notable uncertainties for the 1999-2020 time frame are listed in the table below. However, the possibilities implicit in past events and future predictions are enough to keep any strategic thinker and planner busy for years.

(U) One critical uncertainty is of special interest. Managing regional power shifts will be an enduring challenge throughout the period. How this process will affect global security remains to be seen. This will be particularly true as China and problems in Asia loom ever larger on the international horizon.

(U) One of the more problematic aspects of monitoring and predicting regional power shifts is the question of leadership. The problem of succession is less contentious in democratic states, but in the next twenty years, Algeria, China, Cuba, Egypt, Indonesia, Iran, Iraq, the Koreas, Libya, Nigeria, Pakistan, Russia, Saudi Arabia, South Africa, Sudan, Syria and several others likely will experience changes in leadership. Many of these states have no formal mechanisms for leadership succession, making the process more susceptible to violence and uncertainty, and possibly resulting in radical changes in political (and attendant military) direction.

(U) Transnational groups, especially multinational corporations and criminal syndicates, frequently change leadership. The question is who will emerge at a critical time and become a threat to U.S. interests.

(U) There will be several other elements of concern in managing power shifts, such as regional or localized changes in the balance of power, economic peaks and valleys with strategic consequences, and conflicts that destabilize nations and regions.

<table>
<thead>
<tr>
<th>Critical Uncertainties in The Decades Ahead</th>
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<td>■ Evolution on the Korean Peninsula</td>
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<td>■ Unimpeded access to key resources</td>
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<td>■ Middle East disputes</td>
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<td>■ Impact of a more powerful China</td>
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<td>■ Wild card: large-scale natural/man-made disasters with security implications</td>
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FUTURE THREAT 1999-2020
41
Key Points

**No Global Peer Competitor**

Over the next two decades, no state will be able to match the combined political, economic, military, cultural, and technological power possessed by the U.S. The key "peer" candidates all have long-term, larger problems, and none has the capability or the will to usurp the U.S. over this timeframe.

**Extended transition period marked by uncertainty and power dispersion**

Taking into account the emerging post-Cold War global security environment and the political-military evolution of North Korea, China, Russia, and elsewhere, the United States should expect a long period of transition and uncertainty in the 1999-2020 timeframe. During this period, specific military contingencies will be unpredictable, but the general trend will be toward a dispersal of power.

**Explosive mix of social, demographic and military trends**

Along with this transition, we will see changing social, cultural, and demographic conditions. We have already noted increasing numbers of regional refugees and a rising tide of ethnic violence. We will pass through these phenomena to some more settled condition; however, adverse social conditions in some regions, notably in Africa, will persist.

**Increasing strains on the international security system**

In a period characterized by instability, weapons proliferation and technology transfers will increase the potential for limited conflict, further straining national and international capabilities.

**Technology "leaps" possible**

A destabilizing condition that may occur during this period, particularly when achieved by renegade states, will be the acquisition or development of some advanced technology that could change the local or regional balance of power. Conversely, some new technologies will contribute to stability and peaceful evolution.

**BOTTOM LINE**

Greater chance of conflict between internecine rivals, nation-states and alliances in the future... based on an enhanced ability to conduct warfare and increased competition over resources, markets, and technology... as well as other complex factors.
IV. Regional Assessments

Overview

(U) Major powers and their relationship to each other will remain complex and intertwined. Russia and China—both undergoing lengthy and difficult transitions—will retain important strategic and operational military capabilities and likely represent our most important long-term nation-state concerns. Other major powers may compete more openly—among themselves and with the U.S.—in attempting to shape the future according to their interests.

(U) Large regional powers possess substantial aggregate capabilities and are integral to our regional interests. Select regional powers will retain the military capability to directly attack our allies and our interests with little warning. North Korea’s continued belligerence poses some serious concerns. Though analytical opinion is divided on if and when the Korean peninsula will see reunification, the eventual outcome will weigh heavily on U.S. interests in the region.

“The only fence against the world is a thorough knowledge of it.”

— John Locke
United States

CHALLENGING THE BASIC ASSUMPTION

(U) The United States will remain the sole superpower through its economic, political, military, cultural, and technological superiority for at least the first quarter of the next century. The United States therefore must remain engaged around the world to maintain this status. If this engagement is constricted, the geostrategic environment will rapidly change over the next two decades and beyond. Other powers will move in to fill regional or local vacuums, either by force or political/economic design. From the perspective of other nations, U.S. “interference” in selected regional affairs is easy to point out; what is not often realized is the stabilizing factor that comes with U.S. presence. Current economic crises have affected views of globalization and the global economy. Nevertheless, the interweaving of city, regional, national and international markets will continue for the foreseeable future. Any American isolationism will have a negative impact on the global economic network. Some states and non-state groups will challenge the assumption of American hegemony and reject the notion of Pax Americana outright, but will have limited power and few opportunities to change the status quo. To a large extent, the United States holds the keys to the future of the global security environment.

PERCEPTIONS FROM ABROAD

(U) The United States is clearly recognized abroad as the leading world force. This fact is treated with an obvious mix of emotions and actions. Most of the world sees no end to American dominance at least through the next 20 to 25 years. Perceptions are roughly divided into three groups.

Members of the first group continue to clearly express their displeasure over America’s superpower status. They grudgingly concede this role but continue to employ diplomatic and economic means to achieve their own agendas and frustrate U.S. efforts.

In almost every case, these countries often decry U.S. interference in regional or internal affairs. In part they feel their own authority — and indeed integrity — is challenged.

“They (the French) resent the global reach of America’s power and Washington’s presumption to speak in the name of the international community.”

— Dominique Moisi, French Scholar 1998
The second group can be labeled as “frustrated friends of the U.S.” They have no problem recognizing the totality of U.S. dominance for the next few decades, but are agitated by the futility of attempts to conduct political, economic, and military affairs without the presence of the U.S., and their lack of alternatives. They tend to appreciate the overall benefits of the relationship but remain concerned by perceived U.S. indecisiveness, lack of vision, and overbearing attitude. Germany, Japan, Turkey, Pakistan, and most of Latin America count themselves in this group. One of the chief concerns for Turkey and Pakistan is the lack of full U.S. cooperation and a perceived shallowness of commitment. To some extent, Germany and the rest of Europe raise similar concerns.

“We don’t need you (America) ...what we need is your military!”
— Warren Gill, Canadian Scholar 1998

Some Turkish leaders cite problems with arms deliveries as a U.S. attempt to conduct a “shadow embargo” on Turkey. Latin America has learned to live and thrive in the shadow of the United States; however, tensions and disagreements over issues such as counter-narcotics operations, human rights, and the environment will periodically complicate relations.

(U) The last group chiefly consists of close allies and relatively new states. Members of this group see the United States as an amiable giant and benign leader despite its imperfections. Like frustrated friends, they see Pax Americana extending well into the next century. Though Canada, the United Kingdom, and Australia will at times mingle with the second group, they aim for loyalty in their relationship beyond mere cultural ties and thus are chief members of this camp. They recognize and promote their own international responsibilities often in tandem with the U.S. Hence they fear the occasional isolationist mentality and fickleness of America’s international outlook. The new and “renewed” states of the world — mostly of the former Soviet and Warsaw Pact ilk — view their relationship with the United States as a bit of “fresh air” after what they term as their oppressed existence under Moscow.

(U) The greatest strategic fear expressed abroad is not the dominant presence of the United States in the next century but...
"Power, hubris, and greed are the sins of Western hegemony led by the United States."

— Kanti Bajpai, India Scholar 1998

The lack of it. Even Russia and China recognize the inherent economic advantages of global stability. The second fear is a perceived American shortsightedness in its approaches — or lack of options — to critical international events and issues. Current decisions by the IMF and World Bank — “American-dominated institutions” — have been called into question by Asia and Europe. The fear is that these “recovery plans” are more problem than solution. U.S.-Cuban relations present another case in point. Canada and the European Union have economic and diplomatic differences with Washington over tightening the U.S. embargo on Cuba.

“[U] The American Century is not over ... it has just begun.”

— Josef Joffe,
German Scholar 1998

(U) The United States will remain the sole superpower through its economic, political, military, cultural, and technological superiority for at least the first quarter of the next century. Some states and non-state groups will challenge the assumptions of American hegemony and reject the notion of Pax Americana outright, but will have limited power and few opportunities to change the status quo. To a large extent, the United States holds the keys to the future of the global security environment.
Major Powers

Several states, or groups of states, are expected to be the major powers in 2020. Three of the five major powers are Asian, reflecting the region’s expanding importance.

RUSSIA
EUROPE
CHINA
JAPAN
INDIA

(U) Between now and 2020, no state will be able to match the worldwide strength and influence of the United States in terms of collective political, economic, technological, military, and cultural power. However, there will exist a select group of nations—including Russia, China, and India—with capabilities that are an echelon above those of other regional powers and nations. These major powers will routinely exert influence within their own regions and, in some cases or dimensions, will exert influence on a global scale. They will retain unique capabilities to both assist or frustrate U.S. policies and interests. Relations between and among these major powers and the United States will be a primary factor shaping the future international security environment.

(U) In this environment, differences of perspective among the major powers could become more pronounced because of national positions on key issues. These countries will compete economically and politically over regional and global influence, markets, investments, and access to technology. Though less likely, competition for strategic advantage and resources could be expressed through military power. Among the major powers, China and Russia are likely to be the most challenging for the United States.

(U) The Chinese multipurpose combatant JIANGWEI FFG and its follow-on the JIANGWEI II are in measure part of China's projected influence within the East China Sea.

(U) Joint endeavors such as the Franco-German Eurocopter Tiger attack helicopter represent part of the collective efforts of Europe to compete with the U.S. in the defense industry.
(U) Russian People's National Party: anger and discontent on the political fringe.
(U) Russian Central Bank troubles foster fear among the citizenry and provide a permissive environment for a shadow economy.
**Russian Federation Demographics**

- **Population (Millions)**
  - High birth rate
  - Moderate birth rate
  - Low birth rate

- **Age Distribution**
  - 1995 M/F
  - 2020 M/F

- **Life Expectancy**
  - Male: 64.8
  - Female: 71.5

- **Population — millions**
  - 1995
  - 2020

- **Notes:** Male life expectancy currently at a 50-year low.
Given the magnitude of the armed forces’ problems and the paucity of resources available to deal with them, the condition of Russia’s military will not improve substantially over the next decade and in some areas could get worse.

At the extreme, Russia’s military could even face institutional collapse, punctuated by military unrest, mutinies, and violent political intervention.

Limited defense funds have forced a Russian emphasis on nuclear weapons, which in turn has accelerated the deterioration in conventional force capabilities. This downward spiral leaves Russia with extremely unattractive options for dealing with the regional conflicts, territorial disputes, peacekeeping operations, and terrorist threats that it will most likely face over the next decade.
Longer-Term Potential

(1) Beyond the next decade, prolonged political and economic difficulty probably will yield a chronically weak military that could do little beyond defend Russia's borders. Such a force would pose less of an external threat than an internal danger due to its instability and questionable reliability, particularly if called on for internal disorders and threats. However, a chronically weak Russia might also have a greater propensity to compensate by resorting to other means, such as covert operations or diplomatic grandstanding.

(2) The possibility also exists that under the right conditions—effective political leadership, sustained economic progress, and successful military reform—Russia could emerge 10 years from now as a strengthened regional power with a significantly reduced but modernized military. A strengthened Russia could play a greater role in international military efforts such as peacekeeping operations. Whether it would employ its new strength in cooperative or less helpful ways, however, would depend on the will of its leaders.

(3) Russia's long-term military direction should become clearer by around 2005, when the lasting impact of leadership transition and the effectiveness of efforts at economic recovery, military reform, and defense industry restructuring, prioritizing and modernizing will be more apparent.

Strategic Forces

(4) Ratification of START II in its current form probably will not occur. Acceptance with significant modifications and conditions is more likely. These conditions will complicate the implementation of START II and impede progress on a START III treaty. Ultimately, continued economic instability will push START II further down on the Russian government's overall agenda. It will also continue to be held hostage to the machinations of Russo-American relations involving multiple issues such as Iraq and Kosovo.

(5) Problems with START II ratification and, more important, funding shortfalls have delayed the conversion of SS-18 and SS-19 systems to the SS-27. This is a short term problem. Age and life extension operations will force resolution of the issue sometime in the next decade. Deployment of the road-mobile SS-27 is expected between 2002 and 2005 thus supplanting the aging SS-25 systems.

(6) The prospects for Russia's submarine force look bleak for the next decade.
The Long-Range Aviation (LRA) arm of the Russian Strategic Air Force remains a significant threat. A substantial number of BLACKJACK and BEAR-H strategic bombers are operational, while the bulk of the fleet is currently composed of the BEAR-H strategic bomber. A significant number of BLACKJACK bombers were previously maintained in the fleet, but these have been acquired from the Ukraine and numbers have been increased. The fleet appears to have been maintained and no longer operational.
of Russian society. Russian criminal groups have entrenched themselves in the country’s political, economic, military and social fabric. They undermine democracy at home and are an increasing international threat by virtue of their involvement in alien smuggling, narcotics and weapons trafficking, and their penetration of the economic and financial sectors of sovereign states. There is increasing evidence that Russian criminal activity is expanding rapidly throughout Europe, Thailand, Israel, South Africa, and the Caribbean as well as in North, Central, and South America.

Weapons Proliferation. Poor security at various weapons and materiel-related facilities; unsettled political, economic, and social conditions; the need for hard currency; inadequate law enforcement capabilities; and the growing power of organized crime combine to increase the proliferation threat posed by Russia. Russian strategic forces have adequate security at operational bases and missile storage facilities to prevent the theft of complete missile systems. However, facilities formerly dedicated to chemical and biological warfare programs are less easily controlled.

Other Security Concerns

Environmental Degradation. For at least the next decade, Russia will be unable to deal effectively with its formidable environmental challenges — mainly severe air and water pollution, and inadequate facilities for solid and hazardous waste disposal. These problems will undermine the health of Russia’s citizens by increasing infant and adult mortality rates and incidents of disease. Furthermore, these issues will pose substantial threats to other regions (Russia pollutes adjacent seas by dumping industrial and municipal wastes and chemical munitions, and is likely to continue to be a major generator of ozone-depleting substances and carbon dioxide).

Expanding Criminal Activity. Taking advantage of the chaos afflicting the whole
(U) Russian military personnel ponder their futures.

STRATEGIC IMPLICATIONS

(U) Protests against the Russian government.

"I cannot forecast to you the action of Russia. It is a riddle wrapped in a mystery inside an enigma; but perhaps there is a key. That key is Russian national interest."

— Winston Churchill
Europe

(U) Europe will continue to focus internally for at least the next two decades. Economic and political integration within the European Union (EU) will proceed at a gradual pace with periodic surges. Germany will remain the primary engine for European integration. Military integration will follow a slower track, primarily through NATO, under the auspices of the European Security and Defense Identity (ESDI). The United States will remain a de facto European power by virtue of its political and economic interests and coveted military capabilities.

(C) No overwhelming conventional threat will challenge Europe through 2020. Still, Europe will retain concerns over residual Russian military capabilities. Of more pressing concern will be the continued instability in southeastern Europe and Eurasia, as well as contingencies in North Africa, the Middle East, and the Persian Gulf. Lesser conflicts, nationalist movements, and ethnic strife in Europe will persist in southeastern regions. The fractious and low-level conflict in these regions will not allow easy integration into the rest of Europe. As the fragile nature of the political, economic, and social environment will leave the region susceptible to terrorism and organized crime. Europe will remain inclined to look to the United States for a continued military commitment as the surest counterweight against such instability, particularly from Russia. It is remotely possible that the spread of instability or the spillover of conflict in Russia, Eurasia, or southeastern Europe could precipitate a regional war in Europe.

(S) Because of the overall low threat perception, European defense spending has decreased significantly over the past decade and is not projected to increase significantly over the next 10 years. An increase of 1 to 2% is possible beginning after 2002, but these funds will be marked primarily for necessary modernization projects. Future defense ministers and military planners face competition with social programs and a growing number of politicians who have no military experience or memory of conflict. The current socialist tilt in European governments will guarantee this trend continues for the next four to five years. The end of the Cold War and decreased spending is the underlying factor in the current attempts to integrate European defense and technology companies.

(S) European consolidation will progress depending on the overall economic climate and the dynamics of corporate politics. The primary goal of consolidation is the creation of robust European sectors to compete with the sizable U.S. defense-related firms. It is also hoped that this consolidation will facilitate technical innovation and thus narrow the technology gap with the United States. Success in the latter will enhance NATO interoperability for the short term, but will likely foster continued industrial and technological espionage as well. The open nature of the U.S. R&D
community is its greatest advantage and its greatest vulnerability.

(U) The Franco-German relationship will remain a fundamental part of continued European economic and political integration. It will change, perhaps significantly, but not decline. The original French motivation for emphasizing the relationship with Germany was to ensure that the Germans were fully anchored in the West and to prevent their reemergence as a hegemonic power. Now and for the future, the French want to ensure a similar German anchor in the European Union. The Germans want to guarantee that the French are patched into NATO even though they are not fully integrated into its military structure. Germany, under a Social Democrat/Greens coalition, will still pledge fidelity to the relationship with France, but can be expected to continue pursuing other European ties, particularly with the Labour government in the U.K., with which it has more in common. This is not to say that the relationship will be cast off, but rather that its importance to Germany will be such that the Germans will not reflexively consult with Paris if they feel their national interests are at stake. The issue of subordination to the agendas of other European states and of the United States will continue to be a driving factor in France’s occasional antagonistic attitude as it pushes its own agenda. This factor will continue to inhibit the pace of European integration and add complexity to the transatlantic link.

(S) The Germans will continue to need the French in some measure to conduct actions and make decisions in the European context that they cannot make alone for at least the next 5 to 10 years. Beyond that, the next generation of Germans could either see themselves as a larger part of the sum of Europe or the sum itself, given a successful European Union and NATO expansion to the East. This generation will not feel the weight of history and will be more inclined to approach issues directly as a leader of Europe with the benefits of Germans in mind. Depending in part on the presence the U.S. maintains in Germany, German-American relations should easily remain solid, though defense cooperation will be frustrated periodically by differing opinions on priorities.

(U) The entrance of Poland, the Czech Republic, and Hungary into NATO during 1999 has ushered in a period of “growing pains” that will last for the better part of the next decade. Interoperability in the expanded alliance will be challenged for at
least the next 5 years, as the new members, now in the alliance, are likely to feel free to devote less attention and monies to defense improvements and more to qualifying for European Union membership.

(U) Old Soviet thought processes will have to be purged along with stocks of Soviet/Warsaw Pact equipment. The latter will come with refined defense planning, while the former will take several years. Old thought processes will remain prevalent at the working level for some time as new leaders force changes from the top down, but the experience of NATO and Partnership for Peace (PfP) exercises should facilitate this process. The process of restructuring and building new civil and military infrastructures will take the better part of the next two decades. However, increased economic ties with Western Europe and the U.S. have already helped this process. The new members also change the geopolitical environment for Germany by moving the alliance’s front line considerably to the east. Germany in the next century will be more at ease and a stabilizing force in Central Europe. Conversely, the Poles, Czechs, and Hungarians and NATO hopefuls like Romania, Slovenia, Bulgaria, and Slovakia will be cognizant of their position on the fringes. Poland, in particular, will feel secure in future attempts to expand its influence in northeast Europe with the goal of broadening its commercial interests.

(U) After the year 2000, Europe could face a slowly declining population. This drop in birth rate will begin to take its toll on the workforce after 2010 with a steadily aging European populace. By 2020, the impact will be felt mostly in existing social and political policies that have not already been reexamined. Early
NATO will seek to redefine its role and missions in the aftermath of the Balkan experience.

(6) The challenge brought on by non-citizens will grow significantly, potentially creating civil strife and overstressing European welfare systems. Europe will have to take a unified approach or face the prospect of inadvertently creating friction over diverging immigration policies. Already, Italian and Spanish law enforcement organizations are facing pressure to control the increasing migration. In the next 10 years, use of military support assets—such as logistical services and military police—to aid these civil efforts could increase. In the long run, continued use of such limited defense resources could hinder their availability and effectiveness for use in primary national security missions.

**Alternative Futures**

(6) Further diminishing security concerns will likely lead to further withdrawal of U.S. troops. The continued absence of a unifying Russian threat could encourage an increasingly independent and self-assertive Europe in the European Union and Western European Union (WEU), probably under some combination of German, French, and British leadership. Despite operating under the guise of a union, this arrangement could at times prove to be shallow. This could lead to protracted decision cycles resulting from the conflicting agendas of leaders and groups.

(6) A resurgent and recidivist Russia, over time, could promote increases in defense spending and reinvigorate NATO. Pressure to accommodate those countries that wish to be affiliated with the alliance would be considerable. As a result, NATO would use greater political leverage, military strength, and international influence to prevent such an aggressor from moving against a country not in the alliance but nonetheless considered sensitive enough to defend. Such a scenario could easily muddy relations with Russia and further complicate the internal operations of NATO and the EU.

**THE BALKANS**

(U) Pervasive ethnic tensions will persist for at least the next 10 to 15 years, periodically erupting into violence. Maintenance
of credible peacekeeping forces will be necessary to contain these violent outbursts and deter larger conflicts. International peacekeeping forces continue to operate in a complex environment that poses significant challenges to the establishment of a stable and enduring peace. Compliance with existing and future peace agreements will generally continue as long as peace operations remain credible and the various countries, factions, and groups recognize potential advantages. However, the continued presence of NATO or other international peacekeepers for some extended period is necessary for the maintenance and sustainment of peace.

Overall political and economic reform for the region will proceed slowly. Several impediments, such as the lack of effective and democratic leadership, rampant corruption, and the ingrained divisiveness of the various ethnic groups, will further dampen prospects for reform. Between 2010 and 2015, a generation will have reached adulthood after living through the various crises in Yugoslavia, Bosnia, Albania, Kosovo and Serbia. Unless economic and political conditions improve markedly, the cycle of violence could repeat itself through bitterness over past events. Serbia's once dominant military and political position in the region will likely continue to erode. Other groups in this region such as the Bosniaks or Kosovar Albanians will likely seek ways to exploit this trend and achieve retribution. Although its overall territorial goals have been generally satisfied, Croatia also will view this trend as an opportunity to dominate the northern Balkans region. The issue of ethnic Albanian nationalism will remain the single most complicating factor in achieving stability in the southern Balkans.

Look for the emergence of a larger Albanian cultural-political amalgam in the region.
THE AEGEAN

Athens and Ankara will continue to be unable to resolve the practical and political issues in the Aegean that underlie the tensions between the two countries. Both prefer to avoid war. Nonetheless, a crisis involving Aegean sovereignty issues on Cyprus could erupt and escalate into an unwanted conflict because of perceived provocative actions or miscalculations.

In the event of hostilities, Turkey and Greece expect and plan for a short conflict (3-4 days) and assume that the international community would intercede by then to stop the fighting. Such a conflict, which probably would start in the Aegean, would be primarily an air and naval fight with a Turkish attack on some of the smaller Greek islands in the Aegean and possibly a limited ground operation in Thrace. A conflict that begins in the Aegean would not necessarily spread to Cyprus, but such expansion should not be ruled out. Turkey is expected to hold a quantitative and qualitative edge in force capabilities, though Greece will make modest improvement to its air and air defense capabilities. Greek military equipment acquisitions in the coming years will lessen the prospects of a catastrophic defeat at the hands of Turkey.

Turkey sees its position as an epicenter of three unstable regions: the Balkans, the Caucasus, and the Middle East. This “tough neighborhood” will continue to be plagued with problems of ethnic strife, regional conflicts, religious fanaticism, international terrorism, and weapons of mass destruction. Turkish relations with Syria will increasingly be strained over distribution of water from the Euphrates River. Syria’s support for the PKK, Turkey’s military cooperation with Israel, and Syrian claims to Hatay Province. Both Iraq and Iran will complicate Turkish interests in the region. As with Syria, the Kurdish issue further strains relations with Iraq.

These issues are in addition to Turkey’s close relations with the United States and budding relations with Israel. Iran has the potential of becoming the more important Turkish adversary in the Middle East. Competing interests in Central Asia and the Caucasus and the fact that Turkey is a secular Muslim state will place Ankara at odds with Iran. Turkey’s forceful solutions to regional problems with Iraq and Iran also have the potential for bringing Ankara quickly into conflict with U.S. interests.

Although Turkey appears militarily positioned to survive any of these external challenges and remain a regional power, the Turkish ruling elites will face a fundamen-
tal problem that will likely determine if in fact it can do so. It is almost inconceivable that within the next ten years there will not be a point at which the ongoing ideological clash between secularism and an increasingly fervent Islamist political movement will reach a climax. Secular forces, led by the military, are currently in charge and will almost certainly remain so for at least the next five years. It is questionable, however, whether this dominance can last, especially if the religious fervor continues to grow. Just as the military’s suppression of the Kurds fed the Kurdish insurgency, continued efforts to quash Islamist political movements in the midst of a religious revival could lead to deeper divisions in society and serious urban violence. The key question, then, would be how long the military—seemingly becoming more and more estranged from civilian society—could maintain control.

**BELARUS – UKRAINE – MOLDOVA**

Given the dismal state of the Belarusian economy, a potentially unstable state already exists on that border. Ukraine will continue a balanced relationship with Russia—if anything as a deterrent, since Russia is considered its only external threat. In addition, Kiev will continue to pursue closer political, economic, and military cooperation with Europe and NATO, eventually establishing both as its primary security relationship. The economic crisis in the Ukraine will limit military capabilities for the next 5 to 10 years. Moldova’s problems with its breakaway Transdniestrian region will continue over the next decade but without significant escalation of the conflict or resolution.

**EUROPEAN SECURITY ARCHITECTURE**

Europe will have moved closer to building a credible, perhaps much different security structure in NATO, but these efforts face many impediments from the Europeans themselves. Political cohesion of Europe will become equally important to the actual advantages of collective security. The development of ESDI will proceed haltingly for at least the next decade. Its successful implementation will depend on continued support from NATO—but espe-
"The world has not become a safer place. We still must invest in our security."

Dutch Defense Minister Frank de Grave
Summer, 1998

Drafters of the U.S. — both in leadership and resources. In return, Europe will have greater security autonomy and the Western European Union (WEU) or EU will have the ability to conduct some limited, but nonetheless independent, missions. ESDI efforts will be an important element of the Combined Joint Task Force Plan. From 2010 to 2020, collaboration primarily between France, Germany, the UK and Italy will enhance military capabilities in selected areas such as special force and civil-military operations, advanced avionics, and missile development. The Europeans will still lack any significant power projection capability and will continue to rely on U.S. lift capabilities for extended or out-of-area operations and space-based C4I. They recognize their lack of burden sharing, but contend that they equally share the risks. Most European nations support greater independence in security matters in principle, but do not want to create circumstances where the United States is no longer inclined to commit to the security of Europe. They still see the alliance as fundamental to their security concerns and will not make any effort to change this relationship for the foreseeable future. France continues to believe that the U.S. has too much influence in European security. Any intentions or efforts by the French to marginalize or circumvent U.S. involvement will continue to be checked by Germany and the UK, among others.

In addition, the evolution of the European security architecture could complicate U.S.-Russian relations. Independent European approaches to relations with Russia could conflict with U.S. goals and objectives. Russia, for its part in European security, would prefer to see a greater role for the Organization for Security and Cooperation in Europe (OSCE) with Germany and/or France at its epicenter and largely divorced from the United States.

By 2020, virtually all European nations, including the Baltic States and selected Balkans states, will be affiliated in some way with NATO. With the accession of Poland, the Czech Republic, and Hungary, further NATO enlargement is likely, but probably not for another 3-5 years. Further enlargement could easily have the disadvantage of creating an alliance that is increasingly difficult to manage due to the increased multiplicity of views and concerns. Issues surrounding security requirements, particularly defense spending and burden sharing, modernization, and defense industrial concerns, will be the most contentious. Although northern Europe will champion membership for the Baltic states — individually or as a group — and southern Europe will push for Romania, Bulgaria, and Slovenia. NATO is unlikely to extend invitations to any of these states before 2004. However, the alliance will continue efforts to assist these states in restructuring their defensive forces and infrastructure. The PIP will continue as a

(U) NATO Exercise ARDENT GROUND 98®.
viable vehicle for security cooperation between NATO, non-NATO European nations, and the former republics of the Soviet Union. PIP success depends largely on how U.S. engagement is viewed by Russia in the process. If Americans are perceived as being overbearing or overly intrusive, then the delicate—and often skeptical—nature of Russian perceptions will be swayed to a pessimistic or non-cooperative attitude. Such an attitude could also develop if Moscow is looking for a pretext for non-cooperation as a means to further its own agenda.

**STRATEGIC IMPLICATIONS**

(U) Russia’s evolution is key to Europe’s stability. What will be particularly troubling is Moscow’s inability to control criminal activity, especially the illicit trafficking in proliferation items if Russian social turmoil undermines security.

(U) Europe is an extremely strong economic bloc on the world stage and will remain the first or second largest trading partner of the United States. The European allies will remain Washington’s foremost partners in a variety of security forums and military operations.

(1) The continuation of regional financial crises could limit internal force modernization and other military improvements, thus having implications for the capabilities of our European friends and allies to participate in joint military engagements.

(1) Growth, real or perceived, in the technology gap between the U.S. and Europe will hinder interoperability and increase frictions in the alliance over defense industrial developments and the alliance’s military acquisition strategies. The U.S. will be seen as pushing too hard for acquisition of high-tech equipment available only from U.S. vendors. NATO peacetime decision-making and planning could easily be hampered under such circumstances.

(U) The enlargement of NATO to the east has expanded the range of responsibility and interest for the alliance and has brought the organization closer to areas that will remain unstable for the next 10 to 20 years. Poland, the Czech Republic, and Hungary will continue to have a high degree of concern for issues such as organized crime and extremism. As members of the alliance, they could be compelled to call for indirect assistance from NATO member nations to quell such threats.

(1) A concerted international involvement in the Balkans will probably be necessary for at least the next 15 years. Such operations will also highlight the degree to which Europe can effectively respond collectively with military force and sustain that level of involvement. Russian reactions to American and European efforts to stabilize the Balkans will have broader implications for the continent as a whole. Russian misperceptions and NATO miscalculations could easily lead to tense relations in the future.
(S) If Greece and Turkey enter into conflict, one of the greatest miscalculations by both parties could be on the speed of entry of the international community. Greek and Turkish perceptions hold that any conflict would be short, partly because of outside intervention. The potential exists that any hesitancy by the rest of NATO to intercede could increase and lengthen hostilities.

The United States will remain a de facto European power by virtue of its political and economic interests and coveted military capabilities.

(U) U.S. Apache helicopters supporting NATO operations in Kosovo.

(U) Even the delivery of humanitarian aid is not without challenges to NATO.

(The British Royal Navy and Royal Air Force HARRIER aircraft have been combined under a single joint command in order to achieve more efficiency in UK and NATO operations.
Central Asia and the Caucasus

ENERGY RESOURCES: PROSPECTS, PROBLEMS

(U) The Caspian Macro region will be attractive as a relatively new global source and market for energy resources and infrastructure projects. International interest and investment in the oil and gas fields of this region will continue to grow in concert with the global demand for energy. The region is estimated to contain between 15 billion and 29 billion barrels in proven oil reserves, comparable to those held by the United States.

(U) By the first part of the next century, intensive exploration could result in much larger proven reserves, approaching levels speculated at up to 160 billion barrels. This would equal roughly 25% of the proven reserves of the Middle East. Accordingly, between 2018 and 2020, the Caspian Macro could be responsible for 4% to 5% of the world’s total production. However, during the next decade, investors will still have to contend with numerous obstacles and issues, including legal ownership, regional instability, routing of export infrastructures, and the role of Iran.

(U) Russia will acquiesce to both Western and Asian investments as long as Russian entrepreneurs are included in the concessions. Existing infrastructures, facilities, and networks—despite their poor condition—will support such investment.

(U) Both Iran and China will pursue greater economic and political involvement—particularly in Central Asia—resulting in the emergence of a new “Silk Road.” Uzbekistan and Azerbaijan will resist Iranian, Chinese, and Russian influence by seeking Western ties. Kazakhstan will continue to pursue economic relations with the West; however, because of proximity and Soviet-era centralization, close ties with Russia will continue for the foreseeable future.

(U) Turkey will also contend for influence, further complicating the dynamics of this region. Ankara sees Russia as a useful counterbalance to Iranian efforts to expand influence in the region.

(U) Oil workers repair derricks in drilling fields near the village of Shikhof, near Baku, Azerbaijan.
IV. Regional Assessments

Central Asia and the Caucasus

(U) Georgian refugees from the Gali region rest at a post of Russian peace-keepers in Napagevi.

(U) The region will continue to experience ethnic, tribal, and other forms of interethnic conflict. Central Asian problems and Central Asian involvement in ethnic issues are likely to spill over into both China and Russia. Relations between the United States and the various states of the region should remain “fair-to-good” as many of these states explore economic ties to the West. Continued political, social, and military volatility — particularly in the Caucasus — will hamper economic development and investment. The unique geographic features of the region — its remote location and general lack of infrastructure — would complicate any external efforts at force projection or humanitarian operations.

STRATEGIC IMPLICATIONS

(U) For the next two decades, NATO, at a minimum, will have to devote political — and possibly military — resources to monitor and prevent the potential for instability along its eastern border.

(U) Central Asia could easily prove to be a friction zone between nations competing for influence and access, depending on the region’s long term economic viability. Some measure of broad cooperation is not impossible as long as individual equities receive consideration and play in decision-making.

Caspian Oil Production

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Asia

(U) Asia's economic crisis has severely undermined national and collective self-confidence, but most Asian nations will return to reasonably strong growth over the next decade. Recovery will be uneven, with some countries adopting successful reform while others resist necessary measures or fail to find the right combination of policies. If growth resumes as expected, the total output of Asia will rise to a third of the world total, though per capita income will remain low in most countries.

(U) Shifts in relations among nations will affect the regional balance. The North Korean military threat will diminish with its failing economy, although it retains significant capabilities in missiles, artillery, and SOF. As the North Korean threat wanes, Japan and South Korea will reexamine their own positions in the region. China will not catch up with per-capita wealth of the leading economies for another half-century, if then, but the sheer size of its growing economy will effect a shift in the regional balance of power.

(U) Some countries will continue to lag behind in economic development—North Korea, Vietnam, Laos, Cambodia, Burma, Indonesia, and possibly Malaysia, Thailand and the Philippines. Stability over the next decade will depend on economic progress and on the regional roles of Japan, China, and the United States.

(U) The "Asian Flu" has led many states to cut back on military spending. This decline may persist after economic recovery, though unresolved security concerns will compel some to continue military modernization. Throughout the region, defense spending remains subordinate to the top priority of economic progress and growth.

(U) The current problems may reinforce relationships within the Association of Southeast Asian Nations (ASEAN) and the ASEAN Regional Forum (ARF). This tendency toward regional security cooperation will continue to grow, but also may feed the desire to blame neighbors and Westerners for economic woes and could erode U.S. bilateral and defensive ties in the region. Economic reforms also may fuel domestic political challenges and contribute to internal instability in the short term.

Possible Flash Points

(U) Despite the trends toward regional cooperation, several looming issues could threaten stability in Asia through 2020.

(U) Taiwan. China's goal is peaceful reunification on terms acceptable to Beijing, but missteps in Taiwan or a policy change in China could precipitate a major conflict.

(U) Korea Between the Giants. If the North Korean threat recedes, the long-term geopolitical struggle between Japan and China for influence over Korea could resurface. A unified Korea could lead to new regional tensions and concerns.
between North Korea and the South and its allies, notably the U.S., continues to be possible.

(U) **Territorial Disputes.** Russia-Japan, the Spratly Islands and numerous South China Sea claimants, China-India, India-Pakistan, Japan-Korea, Japan-China, China-Taiwan, North-South Korea and possibly Korea-China-Japan (if Korea is reunited) could result in myriad confrontations.

(U) **Ethnic and Cultural Schisms.** Domestic conflicts could spill over into adjoining areas; separatist movements exist and continue to flourish in several Asian countries. Internal conflict in the Philippines and religious – economic conflict in Indonesia are especially worrisome.

(U) **Leadership Changes.** Such changes may lead to political or economic change with military consequences.

(U) **Energy.** Asia’s oil imports will rise significantly, but dependence on imports will vary. China’s primary source of energy will remain domestic coal, though its import requirements will grow exponentially over the next two decades. Japan and Korea will remain heavily dependent on imported oil. Despite concerns over energy supplies, no Asian nation is likely to develop the military capability to protect sources in, or sea lines of communication from, the Middle East in the next two decades.

**CHINA**

**Economic Outlook**

(U) Over the next two decades, China is likely to enjoy moderate growth but not as high as rates seen during the early 1980s. Past growth has been based on market forces using underemployed labor and resources, rather than increasing productivity for those already employed. There is room for more such efficiencies, but other factors will slow future growth:

(U) **Infrastructure Bottlenecks**—Even under Beijing’s ambitious plans, adequate energy, transportation, communication, sanitation, water distribution, and other physical infrastructures will require many decades to build.

(U) **Worker Skill Levels.** Secondary and tertiary education levels are very low, and industry has not developed the work practices, management expertise, and quality control needed in the modern world.

(U) **Environment.** Economic development has come at great cost to the quality of China’s air, water, and natural environment — perhaps as high as 8% of GDP per year. In the long run, the economic cost of this pollution must be paid, either in cleanup costs or in declining health and productivity.

(U) **Weak Financial System.** Beijing could face a financial crisis much larger than the one that crippled other Asian countries during the past two years. Bankrupt state-
owned enterprises (SOEs), enormous bad bank loans (30% of GDP), and the inability to separate urban infrastructure from SOE ownership create an intractable web of problems. If the economy declines, or banks lose control of private savings, the whole structure could collapse with enormous consequences.

(U) If China avoids this collapse, it will grow around 5% per year and approach the lower ranks of developed countries by 2020. If not, it could face protracted crisis that would leave most of the population in Third World poverty, provoking widespread frustration and political instability.

**Resources**

(U) **Energy.** China’s energy challenges center on infrastructure rather than resources. Demand will increase with economic growth, but domestic coal supplies are enormous and the world oil supply is forecast to meet all needs including China’s for the foreseeable future. China’s challenge is to build power plants, distribution grids, railroads, ports, and pipelines fast enough to sustain economic growth.

(U) **Water.** Pollution, lack of treatment facilities, inefficient irrigation systems, and wasteful practices threaten a severe shortage of clean water in China’s cities over the next two decades.

(U) **Food.** China can meet the bulk of its food needs domestically if it implements the right agricultural policies and addresses its water problems, and the rest of the world can cover China’s import needs for the foreseeable future. Dependence on food imports highlights the importance to China of a favorable international environment and access to world markets.

**Population**

(U) Even if birth rates remain low, China’s population will grow over the next 40 years, driven by the demographic momentum of high birth rates before 1976, and will stabilize at around 1.5 billion by 2050. If birth rates increase again, the mid-century total will exceed 1.8 billion and continue growing fast.

(U) As birth rates have dropped, China’s population has begun to age. The “baby boom” generation of 1956-76 is in its peak child-bearing years now, 20 years behind its U.S. counterparts, and will be in their period of greatest economic productivity over the next two decades. By 2020, China will face the same challenge the United States and Japan face today, as boomers
approach retirement and leave a shrinking pool of working-age adults. The armed forces could face manpower shortages, but more from economic competition than demographics, since China’s military is a small proportion of its population.

(U) Some 75% of Chinese live in rural areas today, but Beijing expects another 25% to migrate to the cities in the next two decades. Besides the challenge of building cities fast enough for 300 million new urban dwellers, the shift will mark a cultural transformation for China, which has always been an overwhelmingly rural country. If China’s economy succeeds, it will be in part due to a near-endless supply of labor for urban enterprises; if it fails, the frustration of hundreds of millions of economic migrants could create a serious political and social crisis.

**National Priorities**

(U) China’s top priorities will remain economic development and political stability.

(U) The regime is likely to become more responsive to the desires and needs of its people, but not significantly more democratic or pro-Western.

(U) Military modernization will continue at a measured pace, with emphasis on selected missions:

- Maintaining a credible nuclear deterrent.
- Developing a more credible military threat against Taiwan.
- Protecting claims in the South China Sea against Southeast Asian rivals.
(U) China is not likely to build the capability to project large conventional forces beyond its immediate borders or nearby seas. China is likely to continue to build a strategic missile/WMD capability.

(U) China's foreign policy will seek to avoid conflict and sustain the trade, investment, and access to technology essential to economic development.

Within this cooperative framework, however, several points of friction will persist. China believes the United States is bent on containing, dividing, and westernizing China, and perceives Japan as its principal rival in the region. Chinese leadership views U.S.-Japanese defense cooperation as increasing the long-term Japanese threat. Taiwan remains the major stumbling block to a coherent and unitary China, and will continue to be a focus for the Beijing government. China believes U.S. policy encourages the independence movement in Taiwan both deliberately and inadvertently. Territorial disputes may flare periodically—though Beijing prefers to defer these disputes until it is strong enough to impose peaceful resolution on its own terms. Furthermore, China remains concerned over ethnic separatism, especially in Tibet and the northwest, and the potential threat such movements pose to the country's stability and unity.

**Military Trends**

(U) The Chinese military will decrease in size during the next two decades to conserve funds for military modernization, although its forces will remain large in comparison with its neighbors. Now numbering about 2.5 million, the People's Liberation Army (PLA) most likely will decline by 10% to 20%.
(U) Absent a major resurgence of Russian power, Beijing sees the air and naval threat from the east as much greater than the ground threat from the north. China’s top military priorities will therefore remain its air, air defense, missile, and naval forces, in order to protect Chinese claims in the South China Sea, pose a credible threat to Taiwan, and repel any possible attack from advanced rivals such as the United States or Japan.

[S] China has recently abandoned all consideration of developing an aircraft carrier and related fighter aircraft for its navy. It is possible that this program will be revived some time in the future, but equally likely that Beijing will decide to rely on anti-ship cruise missiles and fleet air defense, and forego a carrier altogether.

[S] China’s nuclear strategy will continue to emphasize a survivable retaliatory capability to deter use of nuclear weapons by the United States, Russia, or India. China feels this deterrent is at risk over the next decade because of U.S. targeting capabilities, missile accuracy, and potential ballistic missile defenses. Beijing is, therefore, modernizing and expanding its missile force to restore its deterrent value. Mobile, solid-fuel missiles and a new ballistic missile submarine will improve the force’s ability to survive a first strike, while more launchers, on-board penetration aids, and possibly multiple warheads will improve its ability to penetrate missile defenses. Nothing indicates China will field the much larger number of missiles necessary to shift from a limited, retaliatory strategy to a first-strike, war-fighting strategy.

UNCLASSIFIED

**Force Multipliers:**

- Electronic countermeasures
- Denial and deception
- Superior knowledge of local conditions
- Deep strike — ballistic and cruise missiles
- Attacks on staging bases and logistics
- Advanced SAMs
- Information Warfare
JAPAN

(U) Despite its prolonged economic slump, Japan remains among the world's largest and richest economies, and will continue to be for the foreseeable future. In the past two years, Tokyo has cut its defense budget for the first time since the 1950s and still ranks between second and fourth in the world, depending on the estimates of Chinese and Russian military spending. China may surpass Japan in total GNP sometime in the next two decades—again depending on very imprecise estimates of the Chinese economy—but Japan's per capita GNP will remain many times higher, and Japan enjoys a mature and well developed infrastructure that China will need three to four decades or longer to build.

Economic Outlook

(U) The greatest challenges facing Tokyo are economic and demographic. Japan has the oldest population of any large country, and the average age continues to increase due to low birth rates over the past 20 years. By 2020, 25% of Japanese will be over 65, with only 2.4 workers per retiree, compared to 10 per retiree in 1970. The population has already stopped growing, and will decline sharply after 2010 unless birth rates or immigration increase. This would require major social change in Japan. The aging of the population will exacerbate the Self Defense Force's recruitment problems, as the pool of military-age men and women contracts sharply.

(U) Economically, Japan shows no sign yet of ending 8 years of stagnant growth. Most economists agree that the economy requires major structural change, and neither bureaucrats nor politicians have yet addressed the necessary financial, regulatory, and structural issues. If Tokyo does implement needed changes, the economy will begin a slow recovery. If not, Japan's economy will remain near zero growth for several more years. Nonetheless, even with a stagnant economy, Japan will remain the world's second-richest large country, with

A simple measure of the potential for power in Japan and in China can be achieved by looking at the map...
Japan’s growing propensity to contribute military resources to U.N. peacekeeping missions and its willingness to support multi-national military efforts indicate an evolving post-WWII political — military change.

NORTH KOREA

North Korea’s fate hinges, in large measure, on its ability to cope with a failing economy and with decisions taken by its leaders. With its industry in a shambles and its agricultural sector incapable of meeting minimal domestic requirements. North Korea remains dependent upon continued donations of food and China’s willingness to forgive much of Pyongyang’s annual trade deficit. North Korea’s leaders persist in rejecting economic reform and openness that are necessary steps to ease the crisis.
Instead, North Korea has prioritized select industrial capabilities, especially a few of its defense industries, relaxed some internal controls to allow its hard-pressed populace more flexibility in acquiring food and other necessities, and boosted the military’s internal security role (including enhanced protection for the regime). Ultimately, renewed economic development is likely to hinge on a relaxation of tension and economic accommodation with Seoul.

Lacking economic power and allies upon whom it can depend for military support, North Korea clearly believes it must maintain a credible military capability at all costs. This provides not only deterrence and, if necessary, defense, but Pyongyang also uses it indirectly as leverage in international negotiations and in the policy formulations of concerned governments. In the short term, the North will retain the ability to inflict enormous destruction on South Korea. Its ability to conduct large-scale maneuver warfare against the South is eroding, but it is attempting to balance this erosion with improvements in long-range artillery, ballistic missiles, weapons of mass destruction, and special operations forces and associated delivery platforms. Were conflict to erupt, these elements could wreak heavy damage on the northern part of South Korea.

Social problems, including widespread hunger, increased crime, and corruption among civilian and military officials, have accompanied economic failure. Though the possibility of leadership change cannot be entirely dismissed, the regime, with its enhanced security apparatus, appears firmly in control. The likelihood that North Korea will initiate a war to reunify the peninsula is diminishing, but the possibility of conflict spurred by internal instability, miscalculation, or provocation is increasing.

In the longer term, North Korea is not likely to maintain its capacity for conventional military operations without reversing its economic decline, and it cannot reverse that decline without major reform, without opening itself to the outside world, and without relaxing tensions with the South. If it refuses to follow that path, as is likely, it might be able to muddle through indefinitely, maintaining its missile, nuclear, and special operations capabilities but losing its capacity for conventional maneuver warfare. If it does reconcile or reunify with the South, economic rehabilitation of the North will be an enormous task for many years to come and will influence Seoul’s relationships with China, Japan, and the United States.

**Military Trends**

- If North Korea remains hostile, it will maintain its large forward deployed infantry and artillery force, deploying additional long-range systems and emphasizing artillery training. Pyongyang will try to maintain the capabilities of its large special operations forces, including platforms for clandestine insertion of forces into the South. North Korea has thousands of significant underground facilities dispersed widely throughout the country, making precision destruction of warfighting capability very difficult.

- North Korean air and air defense capabilities are modest and will remain so in the future. Economic constraints will preclude buying new aircraft to replace its obsolescent inventory, and pilot training will remain inadequate.

- Pyongyang will maintain large surface-to-air missile and air defense artillery forces but will have difficulty in investing in newer, more capable systems. The army will continue to harden air and air defense facilities and may upgrade its non-auto-
North Korea is not likely to maintain its capacity for conventional military operations without reversing its economic decline, and it cannot reverse that decline without major reform, without opening itself to the outside world, and without relaxing tensions with the South.

(U) SA-2 SAM on parade.
(U) Differing threat perceptions complicate the prospects for security cooperation. Singapore’s defense modernization is driven largely by concern over a potentially hostile Malaysia or spillover effects from turmoil in Indonesia. Most states are wary of Chinese intentions, but the degree of concern varies, with Thailand and Burma maintaining special military ties with Beijing, and Vietnam and Indonesia perceiving a serious long-term Chinese threat.

INDONESIA

(U) This year’s financial and political turmoil is typical of the domestic conflict Indonesia may face over the next 20 years. Indonesia is plagued by chronic communal violence, ranging from ethnic separatists on East Timor, Sumatra, and numerous smaller movements, to periodic pogroms against ethnic Chinese businesses, to conflicts among other political and ethnic groups.

(U) Besides the domestic implications, any major violence in Indonesia has the potential to spill over into other countries—especially Malaysia and Singapore—which share Indonesia’s diverse mix of ethnic groups.

(U) Indonesian students continue to resort to violent protests in light of systemic political corruption in the government and chronic financial turmoil.
India and The Subcontinent

(U) The security environment in the subcontinent is dominated by the confrontation between India and Pakistan, highlighted in 1998 by nuclear tests in both countries and in 1999 by a flare-up in conflict. Their underlying differences, mainly over the disputed territory of Kashmir, are not likely to be resolved soon.

(U) The region will see modest economic expansion over the next decade, limited by the time required to build infrastructure and the need for social improvements. India is likely to achieve significantly higher growth rates than any of its South Asian neighbors. Economic structures are less stable in the smaller countries, such as Bangladesh and Sri Lanka, and will remain vulnerable to market forces and aberrant weather conditions.

(U) Drugs will remain a serious regional threat, with many production and trafficking areas outside government control. Afghanistan will remain the second largest producer of opium in the world, with Pakistan close behind. In addition, Pakistan will remain a key drug transit node. Although the drug trade could destabilize both countries, it is also a significant source of national income, especially in Afghanistan, and high levels of government corruption also foster continued drug production and trafficking.

POLITICAL OUTLOOK

(U) Political violence and terrorism will remain endemic to the region. Islamic militants will continue training in Afghanistan.
and Pakistan, while Pakistan’s oppressed Shia community will continue to receive Iranian funding and support Iranian goals. A spectrum of well-established and loosely organized extremist groups will benefit from this support.

UNCLASSIFIED

<table>
<thead>
<tr>
<th>POPULATION</th>
<th>1999</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>990 million</td>
<td>1.2 billion</td>
</tr>
<tr>
<td>Pakistan</td>
<td>155 million</td>
<td>248 million</td>
</tr>
<tr>
<td>Afghanistan</td>
<td>25 million</td>
<td>41 million</td>
</tr>
</tbody>
</table>

(U) The entire South Asian region remains susceptible to high population growth, low literacy rates, inefficient government, sectarian violence, skewed land ownership, natural disasters, and inadequate physical infrastructure. Even if India moderates its high birth rate, it will overtake China as the most populous country in the world by about 2030. If not, its population by 2050 will be nearly two billion and climbing. AIDS and tuberculosis will be major problems in the region, particularly India; in Pakistan and Bangladesh, the prevalence of HIV/AIDS may be constrained by religious and cultural norms.

(U) Politically and socially, South Asia in 2020 will not be radically different from today. Most governments will remain socio-democratic despite periods of ultranationalist and ethnic tensions. Post-conflict Afghanistan most likely will revert to its pre-conflict pattern of a weak central government with most of the country controlled by tribal and ethnic leaders.
(U) After two wars and numerous border clashes, Pakistani troops stand ready even in the face of a qualitative disadvantage to India's armed forces.
Middle East — North Africa

The principal forces driving Middle East — North Africa (MENA) developments through 2020 will be rapid population growth and urbanization, outstripping the economic resources of many states and fueling internal and regional instability. Many regional states do not appear cognizant of the serious socio-economic challenges posed by these trends. Others will be unable to meet public expectations. Problems will persist with degrading national infrastructure and public expectations of medical care, education, and employment.

The United States will be the major extra-regional factor influencing Middle East developments. However, lack of progress in the Middle East peace process during the Netanyahu government’s rule in Israel, Arab public perception of U.S. bias toward Israel, and Saddam Hussein’s continued hold on power in Iraq have adversely affected U.S. influence. This perception has become generational and will continue to weigh on judgments for at least the next decade.

No specific radical event with the potential to alter the strategic landscape drastically — along the lines of an Egyptian alignment with the U.S. (1970s) or a massive U.S. military intervention (1990-91) — is likely. However, the chances are better than ever that a major event will occur — for example, the fall of the Islamic regime in Iran or the replacement of a secular regime by an Islamic republic in another regional state. Government resistance to reform, because of the threat it poses to entrenched interests, will be high. Successful reform — highly unlikely region-wide — would carry its own perils for the political status quo. At the same time, some states will experience wrenching leadership successions, creating both danger and opportunity for improvement. During this period we can expect shifts in policy away from and toward the United States. The most politically volatile economic challenge facing the region through 2020 and beyond will be job creation. Competition in the labor market will create discontented populations susceptible to exploitation by organizations opposed to the political and economic status quo.

Regional historical constants, such as xenophobia, state rivalries, and ethnic, tribal, and sectarian animosities will defy permanent change and often will be exacerbated by the tension between population and resources. The demand for water, already scarce in the region, will increase dramatically as the population grows. By 2020, the region will face a significant youth bulge. Between 25% and 35% of the population will be under the age of 15. The stress on national infrastructures will be further compounded by the fact that 60% to 80% of the population will reside in urban areas.

(U) Palestinian protestors have and will remain a persistent reminder of the region’s instability.
(U) The rise of radical, politicized Islam will remain a challenge for the future. It is the only force on the horizon capable of channeling discontent and fear into attempts to change the political status quo in particular states. Indeed, the manipulation of Islam to promote various agendas is the most significant threat.
(U) Through the first quarter of the new century, increasing demand for oil and gas—particularly from Asia—will continue to highlight the strategic importance of the Persian/Arabian Gulf. Even by 2020, the region will hold 60% to 65% of the proven global oil reserves. The percentage of oil exports from the Gulf destined for the U.S. will remain below 10%; Europe will account for about 23% and the Far East, including Japan, for over 60%. Depletion of European reserves in the North Sea may contribute to a higher European demand for Middle East crude. Europe’s share of imports from the region will rise and fall within the 40th percentile for the foreseeable future with France and Italy accounting for the majority. Though the Asian economic crisis has dampened the rate of increase in current demand, the long-term demand from Asia will continue upward as further industrialization takes place.

(US) A more rapid increase in the acquisition of advanced weapons and WMD could create a more volatile environment. MENA states will obtain new systems without fully understanding their capabilities or the implications of their use. Miscalculation will become easier, making hostilities harder to predict.

(U) Israeli Arrow II ATBM.
Several MENA states could further their economic and political development, becoming more benign. These states might become more responsive to international norms of conduct. Likewise, they could view their strategic military assets as providing stability for their position in the region.

IRAN

Political Outlook

Iran’s economic difficulties will influence its domestic and foreign policies through most of the next two decades. Internal demographic-resource tension will drive attempts at internal reform. Iran will evolve into a consensus government with more power-sharing among clerics, technocrats, and secularists. Tehran will reduce emphasis on exporting the revolution, but radical Muslims will probably continue isolated acts of terrorism, some of which will be traceable to Iran. Tehran will continue to seek to undermine regional belief in U.S. security assurances and subvert other regional states that remain pro-Western. Iran will also steadily increase its influence in the Middle East and Central Asia over the next decade as a means of projecting itself as a regional power.

(U) President Khatami

Defense Resources

Declining oil revenues will force Iran to prioritize defense spending and delay or cancel at least some procurement and construction projects. However, Iran will continue to assign priority to resources dedicated to its missile and WMD programs. Temporary delays in these programs are possible if the oil revenue decline lasts beyond 2005. Iran can survive temporary reductions in resources allocated to conventional forces and support entities without having a long-term impact on force structure. Iran is likely to protect personnel, but would cut personnel costs around the edges. Special units, such as the Qods force, could avoid cuts entirely.

Military Outlook

Iran is expected to present a continuing regional threat unless major political change occurs. It will remain suspicious of Iraqi long-term objectives and is increasingly concerned with its eastern border where the extreme orthodoxy of the Sunni Taliban challenges the Shiism of Iran’s
Islamic Republic. Iran is developing new military capabilities to deter a post-sanctions Iraq and a hostile Islamic Afghanistan. Enhancements to its conventional forces will be gradual, with a focus on homeland defense. However, underlying difficulties with combat effectiveness and overall readiness will remain in place for at least the next several years. The Islamic Revolutionary Guard Command (IRGC) will continue to compete with the Islamic Republic of Iran Ground Forces (IRIGF) for resources as well as internal responsibilities, adding another challenge to overall Iranian capabilities.

(U) Iranian female troops.

(U) Iranian soldiers and Cobra helicopter; resourcefulness with aging platforms.
(U) Iran will continue to place importance on improved ballistic missile capabilities in part to achieve strategic strike capabilities useful within the region. The Shahab-3 pictured above will increase Iran’s missile capability to 1300km as early as 2000.

Iran is slowly, but steadily building an offensive capability far in excess of its mere defensive needs.
Iran’s military capabilities by 2020 will be commensurate with those of a formidable regional power. It will rely on its ability to provide an independent and substantial defense of its national interests domestically and within the region. Chief among these will be its ability to project power in the Gulf and the establishment of an adequate WMD deterrence to Western intervention.

**IRAQ**

**Political Outlook**

Political transition in Iraq is key to the future of the Arab state. A post-Saddam leadership is likely to be less confrontational and will probably arise from the existing Ba’ath Party. Reconstruction of Iraq’s national economic infrastructure will also be critical over the next decade. As with Iran, demographic and resource problems increasingly will create tension and will provide a hurdle for any significant economic reform. Externally, Iraq will push for increased leadership in the Arab world and will have achieved this to a significant degree by 2020. Iraqi ambitions will be checked by its uneasy relationship with its Persian neighbor. Once sanctions are lifted, historical animosities will have a chance to flourish. Iran’s continued support for Shiite rebels in Iraq’s southern marshes will continue to exacerbate tensions between the two regional powers.

The Kurdish situation in northern Iraq will remain a contentious issue through the next two decades. The fact that Kurds inhabit areas of Iraq, Iran, Turkey, Syria, and the former Soviet Union will add to the dynamic geopolitical mix. The Kurds themselves also suffer from internal feuds and rivalries. Iraq’s two major Kurdish parties, the Kurdish Democratic Party (KDP) and the Patriotic Union of Kurdistan (PUK), will not be able to overcome their differences in the foreseeable future despite the advantages of working together.

In addition to the Kurdish issue, control of the water sources for the Tigris and Euphrates could have the potential to facili-
tate future conflict with Turkey. Demand for water will increase in Iraq’s cities and towns over the next two decades as more than 80% of Iraqis are expected to make their homes in urban centers by 2020. Any inhibiting action by the Turks on water flow into Iraq will further stress civil infrastructures as well as the Iraqi leadership.

**Military Outlook**

Iraq will remain capable of incursions against its Gulf Cooperation Council (GCC) neighbors. Baghdad retains the goal of dominating Kuwait; however, its inability to hold against a determined Western counterattack will limit its options. Relaxed or suspended UN sanctions will allow the Iraqis to modernize their armed forces and will enhance Iraq’s ability to pursue this objective. Iraq’s conventional priorities will be improved missile, air defense, and ground forces. If sanctions are lifted in the next 10 years, Iraq will focus on acquiring new capabilities specifically intended to provide an asymmetric means to counter U.S. dominance and deter U.S. involvement in the region.

**SAUDI ARABIA**

**Political — Military Outlook**

Over the next 5 to 10 years, the Kingdom of Saudi Arabia will experience a rapid succession of changes, but U.S.-Saudi relations will remain viable. The Saudi regime will increasingly feel the threat of prolonged economic constraints and internal demographic-resource tensions. Weakened government finances and declining living standards will pose a challenge to the Saudi government. Under opposition pressure, the regime will likely try to distance itself from the United States on a variety of policy and military issues. However, renewed threats from Iraq
and Iran counterbalance this circumstance. The Saudi leadership will also try to restrain the growth of government spending while implementing fiscal reforms, but this will be an uphill effort.

**Missile Programs**

Islam is the only force on the horizon capable of channeling discontent and fear into attempts to change the political status quo in particular states.

(U) The balance of power between GCC states and Iran and Iraq—crucial to the United States—will remain profoundly unfavorable to the GCC states without external influence.

(U) The Arab-Israeli rivalry will persist in some form throughout this period, remaining highly significant to the interests of the United States.

(U) Both Iran and Iraq will continue to pose an enduring unconventional threat to U.S. interests and a conventional threat to our regional allies.

(U) The importance of MENA energy resources to the economies of U.S., Asian, and European allies and partners will guarantee the region’s strategic importance to the United States for at least the first part of the new century.

(U) Kuwaiti preparations for the possibility of chem/bio attack.
### Possible Status of MENA WMD Programs in 2020

<table>
<thead>
<tr>
<th>Country</th>
<th>Nuclear Operational Program/Status</th>
<th>Biological Operational Program/Status</th>
<th>Chemical Operational Program/Status</th>
<th>Ballistic Missiles Operational Program/Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iran</td>
<td>yes/modernizing</td>
<td>yes/active</td>
<td>yes/active</td>
<td>yes/active IR/ICBM</td>
</tr>
<tr>
<td>Iraq</td>
<td>yes/modernizing</td>
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<td>yes/active</td>
<td>yes/IR/ICBM development</td>
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<tr>
<td>Saudi Arabia</td>
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<td>no/possible desire</td>
<td>no/possible development</td>
<td>yes/active MRBM</td>
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<td>UAE</td>
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<td>no/possible development</td>
<td>yes/possible SRBM</td>
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<td>Yemen</td>
<td>no/none</td>
<td>no/none</td>
<td>no/possible development</td>
<td>yes/possible SRBM</td>
</tr>
</tbody>
</table>

*This is an illustrative scenario based on an extension of current and projected MENA NBC/missile capabilities and intentions described in this primer.*

(U) Hamas militants torch U.S. flag in Lebanon.
Sub-Saharan Africa

(U) For at least the next two decades, Sub-Saharan Africa will remain a region of extreme turmoil and societal upheaval, primarily due to persistent resource constraints, rising population and increasing expectations. Contributing to Africa’s security problems will be poor governance, ethnic rivalries, economic shortfalls, and environmental disasters. Despite these severe problems, more democratic governments are likely to emerge. The fragility of these states cannot be overstated. Many destabilizing factors and the lack of adequate resources could cause them to rapidly backslide and even collapse. In short, the future overall situation in Sub-Saharan Africa will probably worsen before it improves.

Challenges

(U) The greatest challenge for the future is the need for the rule of law and respect for human rights. Poverty, exacerbated in some countries by rapid population growth, leading to economic discontent and contributing to ethnic tension and rivalry, in turn will lead to worsening humanitarian conditions across the continent. In addition to these longstanding problems, at least seven developments are contributing to the challenges Sub-Saharan African states face: the communications revolution, political reform, transnational issues, privatized para-military services, emerging power blocs, population growth, and disease.

(U) An unprecedented explosion in communications technology is well underway, as shown by the proliferation of cell phones, fax services, the Internet, television, satellite-provided services, and so forth. As a result, people across the continent now have ready access to information never previously imagined. With this new access, many Africans have improved their understanding of the world. At the same time, they have become painfully aware of

"The turmoil internationally and on this continent is now on our doorstep."

Former South African Deputy Minister for Defense
Ronnie Kasrils

(U) Revolutionary United Front soldier in Sierra Leone.
the much higher living standards around the world and realize how poor they are by comparison.

As a consequence, their political and economic expectations will continue to rise. They will demand more from their leaders. Current and future guerrilla fighters will be motivated more by spoils than ideology. Although indigenous sentiment for more open government and human rights is genuine, and several states in Sub-Saharan Africa no doubt will pursue political pluralism, true political reform will be mixed. Some states will be successful—Benin, Botswana, Ghana, and probably South Africa—while other countries will face failure or fragmentation and threaten regional stability. Central and East Africa—particularly the Great Lakes region—will present the greatest challenges to regional stability.

Crime, terrorism, illegal narcotics trafficking, and weapons proliferation will continue to increase. Black and gray arms markets will flourish and will tend to overshadow state attempts at control. Government corruption is already widespread, and linkages between criminal elements and politicians will continue to be strong in countries such as Nigeria and South Africa. Besides Sudan, additional Sub-Saharan countries could provide safe-haven to terrorists for financial gain or ideological unity despite being subject to long-term international political and economic isolation. Militant Islam will facilitate terrorist activity and regional instability. The countries in and around the Horn of Africa will be the primary source and target of this Islamic extremism, as will several states in West Africa.

African states are discovering that contractors selling military services can be force multipliers. Contractors provide seemingly cheaper and quicker, but more controversial, solutions, since the practice carries the stigma of hiring “mercenaries” from the outside to deal with internal problems. African militaries will continue to display disparate competence, but by 2020 more forces will tend to be professional—smaller, with potentially improved capabilities. Other African forces will constitute nothing more than a rabble of individuals who started out their military career as child soldiers and grew up in the chaos of the post-Cold War period. For them, basic survival instincts will remain paramount. This kind of force will be most evident in those countries where the social infrastructure has been disrupted for long periods of time, as in Central and West Africa.

At least three regional groupings are emerging as power blocs in Africa. The South Africa Development Community (SADC), Economic Community of West African States (ECOWAS), and Inter-Governmental Authority on Development (IGAD) have tried to provide internal solutions for Sub-Saharan Africa. The SADC and ECOWAS are focused on the security environment without the official blessings of the UN. A few countries, such as Senegal and Nigeria, have made concerted efforts to facilitate regional conflict resolution, while
others, such as Angola, Zimbabwe, and Rwanda, have contributed to the melee by providing forces to ongoing conflicts. These groups could evolve into formal power blocs pitting region against region.

(U) **By 2020, approximately 1.3 billion people will live in Africa.** Nearly 50% of the population will live in urban or built-up areas concentrated in the western and central parts of the continent. The majority of the population will be under the age of 25, and nearly 40% will be under 15. Already, these regions retain the largest numbers of migrants and refugees, a situation expected to continue beyond 2020.

(U) **Disease will continue to overwhelm the health management capabilities of many African governments.** The lack of health care infrastructure will retard economic productivity in some regions. In some countries, basic health care will not improve substantially for some time. Africa’s HIV infection rates and deaths from AIDS are among the highest in the world. As much as 20 to 25% of some populations could be lost in southern Africa alone. This trend will probably persist for at least 10 years.

**Alternative Futures**

A new sense of order, responsibility, and democracy appears to be emerging in certain countries, and potential higher levels of education—brought about in part by the communications revolution—could provide Sub-Saharan Africa with a more stable future.

Nations such as South Africa, Botswana, and Senegal could eclipse their regional neighbors, becoming influential regionally and globally to pursue their interests and to more adequately participate in the world economy. Both Kenya and Ghana continue to hold the line against the instability rippling though their respective regions. Ghana in particular has bucked the trend and has a growing middle class—a cohesive factor for a more stable environment. If African countries continue to increase efforts to intervene in internal conflicts, regional self-confidence could lead to a greater sense of order. This will take both time and dynamic leadership.
NIGERIA

(U) Nigeria has one of the greatest potentials in Africa for both economic success and socio-political disaster. The economy’s oil sector potential has not yet been fully realized nor have the citizens received any large-scale benefit from this primary resource. A new civilian government can provide movement in the right direction; however, corruption is systemic in both the public and private sectors. This will take years to overcome and will require political reform at all echelons.

(U) Despite the election of President Obasanjo, the first civilian elected in 15 years, the Nigerian military will continue to exert influence on the government, possibly hampering efforts at reform. The military regards itself as the guarantor of Nigeria’s integrity and stability as a nation and has not hesitated to assume political power during times of national crisis. However, its leaders do realize the institution has suffered by interceding in government affairs.

(U) By 2020, the Nigerian military will be leaner and more mobile, at least in its structure, and will remain a key political focus. The quality of Nigeria’s armed forces’ facilities and equipment and its military readiness remain difficult to assess. As military and civilian governments alternate control over Nigerian politics, the condition of the military changes, sometimes faring better under civilian than military regimes. Thus, if civilian rule takes root in Nigeria and endures to 2020, the Nigerian military could significantly improve in professionalism and capability. If the historical pattern of alternating civilian and military regimes continues, however, the Nigerian armed forces will remain open to peacekeeping/enforcement operations to underscore its role as a regional power whether under civilian or military rule.

The military has supported the transition to civilian rule under Abubakar’s personal commitment. Yet there is a large element of military institutional self-interest in this outlook. The military still does not fully trust civilian politicians to run the country, and some officers undoubtedly will work behind the scenes to exercise some influence on the political parties and the candidates they select. However, the military realizes that in order to regain access to Western support, they must focus on democratic progress and military professionalism vice promoting a specific political agenda. Long deployments in Liberia and Sierra Leone have underscored the need, in particular, for logistics training, communications equipment, transport aircraft, and basic infantry equipment.
forces are likely to mark time and look much as they do today.

Over the next two decades, Nigeria will continue to play an important role in West Africa and perhaps the entire continent. Nigeria’s forces will remain the cornerstone for ECOMOG (ECOWAS Cease-Fire Monitoring Group), which appears to be evolving into a permanent feature of West African security.

**SOUTH AFRICA**

For the near term, the country’s transition to a multiracial democracy probably will remain on track. The black majority will continue to dominate domestic politics, while the white minority will retain its hold over key sectors of the economy. The ruling African National Congress, fresh from its electoral victory in 1999, will continue to dominate the political stage for the next five years under President Thabo Mbeki. However, the next elections, scheduled for 2004, will set the stage for South Africa’s political development in the 21st century. Once again, the ANC probably will win at the polls, but its adherents are likely to split into moderate and radical wings because of their differences over economic and social issues. Popular pressures to effectively address these issues will intensify, but Pretoria will be hard-pressed to respond adequately. A resurgence of political violence cannot be ruled out, particularly if radical ANC leaders capitalize on government shortcomings, rival Inkatha Freedom Party members remain at odds with the ANC, and whites perceive that they will become economically disenfranchised to placate black populist demands. The potential also exists under this resurgence for accelerated white flight and attempts by the white community to paralyze the economy.

The South African National Defense Force (SANDF) will continue its transformation well into the next century. By 2020, the SANDF will be a smaller, black-led and -staffed force, with a greatly reduced role for whites who currently dominate large elements of the Air Force and Navy officer corps. Constant political pressure on Pretoria to deliver on social welfare programs will force the SANDF to cope with austere budgets for several years. Some defense modernization efforts will be curtailed or left unfulfilled, forcing the military to rely on equipment that has already exceeded its lifespan, such as the Cheetah fighter aircraft and Olfant main battle tank.

The Navy probably will receive much-needed corvettes, and the Air Force could pick up some light fighter/trainer aircraft, but most other needs will remain outstanding, barring generous “offset” arrangements with foreign defense equipment manufacturers. Although the SANDF will
have to make do with less, it will find itself under growing pressure to become more active in regional peacekeeping operations. Its involvement in external military ventures, however, will be tenuous at first. At the same time, its involvement in internal security matters is expected to increase, especially if the crime rate continues to spiral upward. The SANDF is likely to be called on frequently to support police activities aimed at curbing political violence, illegal cross-border activity, and organized crime.

**STRATEGIC IMPLICATIONS**

In 2020, Sub-Saharan Africa could provide basic industrial output—both in resources and light manufacturing—for the developed world, particularly Europe, where the indigenous workforce will be shrinking. Petroleum reserves in West Africa will continue to provide Europe with a viable energy supplement and periodic alternative to Middle East reserves. Ongoing instability, and the continuing movements of large numbers of displaced persons and refugees, will stress this potential economic relationship. Thus, the demand for international humanitarian assistance to avoid famine, pestilence, genocide, and overall instability could carry even greater importance. The U.S., UN, and possibly NATO forces will deploy to the African continent for limited peace operations. France can be expected to play a diminished role and pursue its own agenda. Although the threat of a major conflict with these deployed forces will be minimal, the level of insecurity and dismal economic conditions will put them at risk. Relations between Sub-Saharan African countries and the United States will be generally friendly and positive as African countries seek increased U.S. trade and economic investment.

The Sudanese People's Liberation Army (SPLA) has been engaged in a conflict for ten years with the ruling National Islamic Front (NIF) regime that started as a southern rebellion and now includes support from Ethiopia, Uganda, and Eritrea. The situation promises to continue to be a catalyst for ongoing and future humanitarian disasters.
Latin America

The still-shallow roots of democracy in Latin America will be tested through 2020, as the region continues—and in some countries, struggles—to complete the transition to market-oriented economies and open democracy in the face of corruption, social inequalities, rampant crime, and a legacy of authoritarian rule. Increasing transparency in political, economic, and military affairs ensuing from growing regional integration is favorable for consolidation of democracy in Latin America. Nonetheless, the region’s vulnerability to severe economic shocks and the failure of traditional party politics—based largely on personalism and self-interest—to address the region’s toughest social problems will continue to generate threats to stability and the potential for democratic reversals. Some countries may retain the trappings of democracy but fall back to de facto authoritarian rule, thereby creating subtle challenges for United States.

The pace of continued democratic progress in Latin America hinges in part on the outcome of the current trend evidenced in some countries of eroding popular confidence in the ability of traditional political forces to solve the problems of crime, corruption, and social and economic inequality. Peru and Venezuela are the best current examples of the abandonment of traditional political parties for “new ideas.” The process may be underway in Mexico.

The trend could result in the rise of Fujimori- or Chavez-like strong-men—“caudillos”—willing to dispense with constitutional restraints and risk international scrutiny in their efforts to roll back the erosion in the quality of life for many Latin Americans. Also worthy watching is the trend for some Latin leaders to try to extend their rule beyond legal limits by subversion or constitutional manipulation. At this juncture, Peru, Venezuela, Paraguay, Haiti, and possibly Suriname risk falling, at least temporarily, into nondemocratic rule in the next 10 years. This trend, however, may not lead to autocracy; the process may actually make traditional parties and politicians more accountable and in touch with key issues, or generate more responsive parties, in the process strengthening democracy.

Subordinating military and security forces to civilian authority and gaining their acceptance of civilian defense professionals probably will be widely accepted by 2020 as armed forces adjust to their changing role and position in society. However, military institutions will retain significant influence and high levels of autonomy in many
countries, at least for the next decade, and some resistance to more civilian involvement in armed forces policy and operational activity will remain. Most regional militaries view themselves as guarantors of their constitutions. Should politicians opt for extraconstitutional measures to govern or extend themselves in office, militaries could once again be tempted to intercede in political matters.

Latin American leaders are for the most part likely to continue promoting market-oriented economic policies and reforms, but international economic conditions and an array of domestic economic factors could affect regional economic growth and stability. Public tolerance of reforms, reduction in social services, and erosion of quality of life increasingly will be challenged in the out-years if results are not tangible. Multilateral trade agreements will remain popular, and many Latin American governments will pursue subregional or other groupings, such as the Common Market of the South (Mercosur) in the Southern Cone, to achieve a multilateral approach to trade in the region. Trade integration and ties to international financial institutions such as the IMF also should check most impulses to abandon market-oriented policies. Defense budgets in general will remain stagnant with military funding continuing to average just over 2% of GDP regionally.

Over the next two decades, relations between Latin American countries and the United States—except Cuba—and that too could change—will remain friendly and positive. The threat of armed confrontation between a regional military and the United States is small to nonexistent. However, tension and disagreements over some issues, such as mandated reports on drug certification and human rights observance and practices and perceived interference in domestic affairs, will periodically complicate Washington’s relations with hemispheric governments and affect military-to-military ties. U.S. intervention to stabilize a chaotic situation remains a distinct possibility.

Intra-regional relations will remain generally good throughout the period. Strides in democratization, regional economic integration, and developing confidence- and security-building measures among hemispheric nations and armed forces will enhance interstate relations and cooperation and facilitate the peaceful resolution of quarrels. However, regional armed forces will remain sensitive to military developments in neighboring countries. Numerous unresolved land, border, and natural resource disputes, as well as traditional animosities and rivalries, will remain and could periodically cause abrupt armed clashes between neighbors that will not lend themselves to quick or easy resolution.

Drug trafficking will remain a serious threat and major source of corruption and violence in the Western Hemisphere through 2020 and will continue to generate problems in U.S. bilateral relations with many governments in the region. Tremendous wealth will continue to allow drug traffickers to use political influence, bribery, and tactical and strategic alliances with insurgents and paramilitary groups to challenge local and national security forces, intimidate the populace, and undermine
governments. The violence and corruption associated with drug trafficking will challenge several governments’ abilities to assert control over national territories and perform nation-building functions. In countering the drug threat, some nations’ violation of human rights will become increasingly problematic and at odds with U.S. goals and objectives.

(U) Insurgency in Latin America, while significantly decreased, will remain a threat in some countries, particularly Colombia, Peru, Panama and Mexico through the near-term. Given current trends, the threat of instability to the security of Colombia’s political and economic institutions could become substantial in the next 5 years, and its spillover effects will exacerbate an array of destabilizing problems in neighboring countries. While insurgencies elsewhere will not seriously threaten stability, they will demand scarce resources, and counter-insurgency operations will inevitably lead to accusations of human rights abuses.

Terrorism will persist in Latin America through 2020. Several factors — loss of support, growth of democracy, and counter-terrorism — have lowered the activities and profiles of the region’s terrorist groups. These groups will try to reinvent themselves, moderating their Marxist rhetoric while seeking to generate popular support by embracing the causes of anti-neoliberalism, land redistribution, indigenous rights, nationalism, and possibly even ecological preservation. External terrorist groups, such as radical Middle East organizations, will continue to see Latin America as a venue for infiltrating overseas communities, primarily to raise funds and to undertake selective operations against U.S. or Israeli interests. The region’s terrorist groups and insurgencies are likely to remain anti-U.S., at least in rhetoric, because of U.S. identification with market-oriented economic policies.

Latin America’s population growth — an estimated 122 million, or about 25%, in the next decade alone — will create labor pools that will outpace even the most optimistic economic projections. As a result, Latin America — particularly Central America, Mexico, and the Caribbean — will remain a major source of illegal immi-
migration into the United States. Migrant remittances from the U.S. probably will remain a critical ingredient of many Latin economies, and migration will remain a key social safety valve for many countries. A major unraveling of the political or economic situation in Cuba, Mexico, Haiti, or the Dominican Republic could produce major mass migrations toward the United States.

(U) The region also will remain highly vulnerable to natural disasters. Regional governments and multilateral organizations will look to Washington to provide the bulk of any needed humanitarian aid. However, Latin militaries will continue to play a leading role in disaster relief in their respective countries.

Most regional militaries will focus throughout the period on force modernization, restructuring, and redefining roles and missions; only a few countries, such as Chile and Brazil will acquire major advanced weapon systems. Argentina, Peru, Ecuador, and probably Venezuela also would like to modernize their fighter inventory, but budget shortfalls are likely to present obstacles. No ballistic missile development programs are active in the region, and none are projected to be started or renewed during the period. The threat of regional nations acquiring WMD is considered small. Colombia and other nations, probably including Mexico, will focus their modernization and sustainment programs on improving capabilities to fight both drug trafficking and insurgency. The United States will be looked upon as a primary source for training and equipment and, by many, as a model to emulate.

Downsizing, restructuring, and redefinition of roles and missions are likely to lead to increased interest and participation in multinational peacekeeping operations by the region’s governments and armed forces in order to retain at least minimal defense capabilities. Most countries, however, will restrict such participation to activities outside the hemisphere and will require or seek outside support—particularly funding, transportation, logistics, and possibly equipment.

Central American efforts to foster enhanced regional military cooperation and integration, such as the Conference of Central American Armed Forces, as a means of focusing increasingly scarce resources on common military requirements are likely to grow. By 2020, such efforts may expand to include several Caribbean nations. However, lingering border disputes and historic distrust will continue to impede these undertakings.

The Panama Canal will revert to full control of the Panamanian government by the end of 1999. The Panamanian National Police (PNP), the country’s nominal ground security force, will assume total responsibility for protecting the canal operating area along with its other national security missions. Although the current threat to the canal is low, the increase in responsibility will strain the already limited resources and capabilities of the PNP, which will face continued and possibly even larger challenges from narcotrafficking and border security issues.
Alternative Futures

Though currently unlikely, a prolonged global financial crisis would take its toll on the economies of Brazil and Mexico. An economic collapse would create major instability in these states, compounded by widespread social disorder. This could generate a migration surge and endanger U.S. citizens and interests in the region. In addition, such an environment would disrupt counterdrug efforts in Latin America.

CUBA

Fidel Castro remains in firm control of the Cuban government and is likely to be its chief of state for as long as he desires. His departure from power, however, is virtually certain before 2020, probably from natural death or voluntary resignation. Political calculations will influence heavily any decision by Castro to voluntarily leave office, and he no doubt would name his successor and assume the role of elder statesman with veto power over important policies.

The Cuban Communist Party—even without Castro at the helm—likely will remain in power. However, a post-Castro government—particularly after Castro’s death—probably would liberalize the economy more rapidly, and any concomitant relaxation of U.S. foreign policy would be likely to spark debate over the extent of political liberalization inside and outside the Communist Party. Fundamental political change would probably result.

Cuba’s division-riddled and personality-dependent domestic opposition groups are unlikely to gain much future leverage, even in a post-Castro Cuba. The Catholic Church will support democratic reforms, but not regime-stabilizing activities. Cuban exiles lack the military capability or political support in Cuba to destabilize the island, but their activities could provoke a U.S.-Cuban military confrontation.

Maintaining economic stability and growth will be the chief challenge to Castro and the Party over the upcoming 5-10 year period. Poor or declining economic growth would be far more likely than Castro’s departure to provoke domestic instability and disagreement over appropriate actions to be taken. State control of the economy and Havana’s inability to borrow money from international lenders will continue to hinder economic growth. As a result, Havana will have to choose between continued state control of the economy with accompanying popular frustration, and genuine economic liberalization that may pro-

The Cuban MIG-29; an acquisition after its time.
duce autonomous power bases and demands for political reforms.

Continued state control of the economy and/or slow economic recovery will encourage Cuban emigration to the United States. The Cuban government currently seems intent on honoring the migration agreement with the United States, but several hundred thousand Cubans would like to leave the island. A change in Cuba’s policy or significant economic or political turmoil on the island could lead to a major outflow of refugees.

The Revolutionary Armed Forces (FAR) will remain loyal to Castro. The high command has demonstrated concern over the speed of economic reforms—they favored more rapid change prior to 1994—but probably will continue to agree with Castro on the need to maintain the Communist Party’s monopoly on political power.

Continuing budgetary constraints will prevent the 50,000-man FAR from deploying substantial numbers of combat troops abroad or substantially improving fighting ability for at least the next decade. A small number deployed in the Congo and Ghana are providing a funded service. However, Cuban security forces are likely to remain fully capable of maintaining internal stability in the face of any spontaneous or organized domestic unrest.

Mexico will continue its historic democratic transition. Political power will become more diffused as the Institutional Revolutionary Party (PRI) loses its traditional dominance and a multi-party system emerges. Opposition parties will continue to gain a more active role in governing the country, contesting elections at the federal, state, and local levels. The presidential election in July 2000 will shape Mexico’s political future, and at this point, any of Mexico’s three major parties could win this election.

Mexico’s military will become responsive to a more diverse political elite as opposition parties grow more involved in governing the nation. Future civil-military relations may be redefined, and civilian
leaders may opt to remove the military from some civil police and control functions.

Narcotics trafficking and its ability to intimidate and corrupt officials at all levels will pose a formidable challenge to Mexico’s government and society in general. Mexican criminal groups will become even more involved in both the movement and distribution of cocaine serving the U.S. market. Mexico also will remain a heroin supplier and the main source for most of the foreign-derived methamphetamine and marijuana in the United States through 2020.

(U) Mexico’s participation in the North American Free Trade Agreement (NAFTA) will make the transition to a market economy irreversible. Northern Mexican states increasingly will become integrated with the U.S. economy—reflecting new direct foreign investment, substantial infrastructure improvements, and expanding free trade arrangements with the rest of the world—while southern states will continue to lag in job and income growth.

Economic restructuring, underdeveloped safety nets and government services, marginalization of impoverished states, and continued deficiencies in public education will hamper Mexico in resolving pressing social issues, increasing its vulnerability to occasional, localized, violent upheavals.

Long-standing, deeply-rooted Mexican sensitivities over perceived U.S. encroachment on Mexican sovereignty and undue U.S. influence over Mexican affairs will continue to affect and limit the nature of bilateral relations with the United States. Mexico periodically will show its disapproval of perceived U.S. meddling in its internal affairs but will avoid jeopardizing economic ties.

Brazil is attempting to pursue one of the most extensive force modernization programs in Latin America to replace its antiquated military equipment. However, President Cardoso will have to focus on avoiding economic catastrophe, consequently hampering growth in the defense budget and curtailing modernization efforts.

BRAZIL

Brazil should make considerable progress toward asserting itself as the principal political, economic and military power in South America by 2020. Politically, Brazil is solidly democratic. Despite a series of political and public security crises that could have afforded the military the pretext for intervention in politics, the armed forces have shown no interest in involving themselves in the political process except for lobbying on defense matters. The influence of the military service chiefs will diminish even further with the establishment of a unified Defense Ministry within the next year, though the complete subordination of the independent services to the ministry will be gradual.

There are few significant threats that would jeopardize the democratic order in Brazil. Leftist labor parties have won elections at local and state levels as well as in the national legislature, but their agenda has little public support at the national level. Protests and property confiscations by organized landless groups have generated localized conflict and national publicity but have not generated effective political
support: police and military security forces have contained them. No domestic terrorist groups are active. Brazil’s public security forces, augmented by the military as directed by the president, will be able to contain the feeble and sporadic challenges to public order.

Brazil will follow an active foreign policy agenda aimed at increasing its influence as a regional power and furthering its historical aspirations to be recognized as a world power. Brazilian foreign policy will be strictly independent, based on Brazil’s perceptions of its interests. Brazil’s foreign policy will remain aimed at enhancing its global political prestige and integrating it into the world economy on the most favorable terms possible. Brazil and the United States will enjoy good cooperative initiatives when their foreign policy objectives coincide, but Brazil occasionally will distance itself from U.S. positions. Brazil will continue to press its interest in becoming a permanent member of the UN Security Council.

Brazil will maintain the largest armed forces, nearly 300,000, in Latin America while taking measures to improve its operational capabilities. Strategic security priorities over the next two decades will be on force modernization, including the acquisition of advanced fighter aircraft in the next decade, the Army’s Rapid Reaction Forces, effective integration of computerized C4I at the national level, and deployment of the Amazon Surveillance System (SIVAM).

**STRATEGIC IMPLICATIONS**

By virtue of its proximity to the U.S., Latin America will continue as a strategic interest well beyond 2020. Economic cooperation and integration will further the importance of this relationship.

The threat of drug trafficking and associated organized crime and the implications of countering it will remain a complex and at times contested issue in the region. The United States will periodically be challenged to deal with Latin American politicians tainted by allegations of ties to traffickers.

Migration brought on by economic determinism and political dissatisfaction as well as future humanitarian disasters will have a direct political and economic impact on the United States throughout the next two decades.

Though it faces no conventional threat, the Panama Canal could function in a less than secure environment under lackluster Panamanian stewardship. The safe transport of U.S. economic and military resources through the canal and region will remain of great concern.

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**UNCLASSIFIED**

<table>
<thead>
<tr>
<th>Brazilian Economics At A Glance (in $)</th>
<th>1999</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total GNP (PPP):</td>
<td>1.1 billion</td>
<td>2.6 billion</td>
</tr>
<tr>
<td>Per Capita Income:</td>
<td>6.7 thousand</td>
<td>12.8 thousand</td>
</tr>
</tbody>
</table>

Brazilian economy is the 8th largest in the world (measured by GNP at current exchange rates)

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FUTURE THREAT 1999-2020
Regional Powers

Ambitions of regional powers will lead to conflict somewhere in the world each decade.

<table>
<thead>
<tr>
<th>REGIONAL POWERS</th>
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<tbody>
<tr>
<td>ISRAEL</td>
<td>SOUTH AFRICA</td>
</tr>
<tr>
<td>IRAN</td>
<td>TURKEY</td>
</tr>
<tr>
<td>SYRIA</td>
<td>BRAZIL</td>
</tr>
<tr>
<td>IRAQ</td>
<td>NORTH KOREA</td>
</tr>
<tr>
<td>SAUDI ARABIA</td>
<td>INDONESIA</td>
</tr>
<tr>
<td>NIGERIA</td>
<td>EGYPT</td>
</tr>
</tbody>
</table>

(U) Regional powers possess aggregate capabilities less than those of the major powers, but greater than those of lesser states. Today’s regional powers include Brazil, Egypt, Syria, Israel, South Africa, Nigeria, Turkey, and Indonesia. Also in this category are a number of so-called rogue states, including Iran and Iraq, and less comprehensively, North Korea, Serbia, and Libya. Regional powers in general will gain in influence and power by 2020. They will do so because of projected long term positive economic growth rates in the developing world and more accessible information, technology, and transportation systems.

(U) Some regional powers will be ambitious in their areas because they will want to attain control of regional wealth or key resources, or because their leaders will want to divert attention from domestic problems through external aggression. In addition, some of these states will see themselves as ideologically pitted against the West. Some, for example, will be influenced by political or religious extremism. Historically, few decades have not had military conflict among powers of this size, and we are unlikely to transition through the next 20 years without more of the same.

(U) Serbian tank.
V. Defense Systems, Science and Technology

Overview

(U) The forces and tools integral to the development of national defense policy and military doctrine are experiencing an evolution concurrent with the dynamic change in politics, economics and technology today. Modernization and hybridization are prevalent in virtually every facet of military force structure while missile forces and space-related systems are being upgraded or developed with new technologies. To date, the development and integrated application of the most important military technologies and concepts has been limited to advanced western militaries—particularly the United States. One key reason is economic. In general, these technologies are very expensive to develop and maintain, and most nations have emphasized other priorities since the end of the Cold War. With reduced domestic procurement, declining foreign consumption, and other fiscal imperatives, many nations have not had the motivation, the resources, or the capability to pursue high technology military endeavors. This has resulted in the pursuit of force downsizing/restructuring and the acquisition of sub-systems and components necessary to improve existing platforms and capabilities. In a few cases such as Iraq, Iran, and North Korea, there remains a willingness to maintain higher levels of strategic development at the expense of conventional forces and societal demands.

(U) Increasing military technological potential, combined with constrained defense spending worldwide, make it extremely difficult to forecast just which technologies, in what quantity and form, will make it into the military capabilities of future adversaries. In many cases, the issue will no longer be which technologies provide the greatest military potential, but which will receive the political and resource backing to reach the procurement and fielding stage. In a related trend, civilian technology development is now driving military technology development in many countries. This puts a higher premium on understanding how potential adversaries link their civilian and military research efforts, and on identifying those nations that are innovative in applying (vice developing) advanced technologies to military ends.

(U) The new and modified conditions of forces and technology affect our own effort to structure the U.S. armed forces, including the planning, development, and procurement of current systems as well as the development of the strategy and doctrine to face the adversaries of the future.

“You can do anything with a bayonet except sit on it.”
—Napoleon Bonaparte
Global Defense Trends

Defense spending has leveled off globally since the precipitous fall from 1988 to 1995. Slow economic growth in the near term will provide little capital for any significant upward trend in defense spending and indeed, with low conventional threat perceptions, combined with significant domestic spending imperatives, defense planners will be hard pressed to justify significant increases. States will seek to recapitalize inventories and restore some capabilities (air defense) that have generally languished since the late 1980s, but such recapitalization generally will be modest. There will be notable exceptions, especially in countries that seek weapons of mass destruction and missile systems for the delivery of weapons inter-regionally.

Increased economic constraints and redefined military requirements have led to a major reduction in global defense manpower during the last decade. This trend is likely to continue, albeit at a slower pace, for most of the major powers. In contrast, many regional powers will maintain relative stability in their number of active forces, and in regions of tension or conflict there actually may be increases in the size of military forces. Such increases are likely to be circumstantial, however, with countries expending their active manpower only when compelled by specific events. The progress of force reductions and adjustments will continue to be frustrated by vacillating political support and leadership. At the same time, such measures will have to account for improvements in housing, retirement, and other quality-of-life issues. The following graphic depicts the world’s largest active armed forces along with their general trend in manpower.

<table>
<thead>
<tr>
<th>Size of Armed Forces</th>
<th>Decreasing</th>
<th>Steady*</th>
<th>Increasing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater than 1,000,000</td>
<td>China</td>
<td>United States</td>
<td>Russia</td>
</tr>
<tr>
<td>500,000- 1,000,000</td>
<td>India</td>
<td>North Korea</td>
<td>Iran</td>
</tr>
<tr>
<td>200,000 to 500,000</td>
<td>Pakistan</td>
<td>South Korea</td>
<td>Great Britain</td>
</tr>
</tbody>
</table>

* Fluctuating or nearly stable
** All European NATO countries aggregated

(Sources: International Institute for Strategic Studies)
Although the global trend is a steady or decline in armed forces, the overall numbers of active armed forces can be misleading. For instance, they do not take into account reserve elements and their role in national security. North Korea's reserves total about 4.7 million and will be included in available first line personnel in any major conflict. This represents almost 68% of North Korea’s male population between the ages of 15 and 50. Brazil has a relatively low number of active forces at about 313,000 compared to the nearly 1.3 million in its reserves. The actual trend in manpower also can be misleading. When China reduced the Peoples Liberation Army (PLA) by 500,000, it increased the Peoples Armed Police by the same amount, thus representing a shift in forces that remain a potential resource for the PLA. It is important to note that any long-range forecasts on manpower issues will have to go beyond the numbers and look at evolving strategies and doctrines as well as training and readiness.

The world arms market is expected to decline until 2002 because of the ongoing worldwide financial crisis. In 1996-97, new arms agreements decreased by 15%. The drop in world oil prices was or has been particularly punishing for Middle Eastern states, severely limiting their ability to finance large arms purchases. Delivery values, which have increased recently as equipment purchased in the late 1980s and early 1990’s is finally received, will decrease significantly in the coming years. Competition for future arms contracts will continue to grow, making offset deals and creative financing crucial in sustaining the market for new armaments. Secondhand markets will flourish by attracting customers are unable to afford new weapons.

**Major Arms Recipients**

<table>
<thead>
<tr>
<th>Saudi Arabia</th>
<th>Turkey</th>
<th>Egypt</th>
<th>U.A.E</th>
<th>Kuwait</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taiwan</td>
<td>China</td>
<td>India</td>
<td>South Korea</td>
<td>Israel</td>
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</table>

Defense industries will continue restructuring. Global defense producers will refocus their industrial efforts in two ways. Producers in industrial nations will strive for consolidation and modernization, and those in developing nations will aim for selective expansion. Industrialized nations, which account for the overwhelming share of weapons production, will continue to consolidate their defense industrial efforts.
Projected Most Capable Regional Arms Producers (excluding the U.S.)

(U) This table of leading regional defense producers is based on a subjective comparative measure of the overall breadth and depth of industrial capabilities projected over the next 10 years. Actual output of weapons will depend on economies, force requirements, and export orders. The countries are listed in order of importance from left to right by region; cross-regional comparisons are not implied.

<table>
<thead>
<tr>
<th>REGION</th>
<th>Country</th>
<th>Country</th>
<th>Country</th>
<th>Country</th>
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<tbody>
<tr>
<td>EUROPE</td>
<td>France</td>
<td>UK</td>
<td>Germany</td>
<td>Italy</td>
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<tr>
<td>ASIA</td>
<td>Japan</td>
<td>China</td>
<td>South Korea</td>
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<tr>
<td>SOUTHEAST ASIA</td>
<td>Australia</td>
<td></td>
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<tr>
<td>MENA</td>
<td>Israel</td>
<td>Iran</td>
<td>Egypt</td>
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<tr>
<td>EURASIA</td>
<td>Russia</td>
<td>Ukraine</td>
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<tr>
<td>SUB SAHARAN AFRICA</td>
<td>South Africa</td>
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<tr>
<td>SUBCONTINENT</td>
<td>India</td>
<td>Pakistan</td>
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<tr>
<td>LATIN AMERICA</td>
<td>Brazil</td>
<td>Argentina</td>
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(b)(1)(4)(c)
Ground Force Trends

(U) Most ground forces are undergoing downsizing. Many developing countries have outdated equipment that is either non-operational or in serious disrepair, while their modernization efforts focus on acquisition of updated “Cold War” systems. Developed nations are in various stages of modernization but most are contending with resource competition with other defense programs as well as domestic issues. Doctrine is evolving slowly worldwide; however, most nations continue to adhere to antiquated tactics and practices mirroring old Western or Soviet modes. Levels of training and logistics are in tandem with levels of modernization and doctrinal advancement. Doctrinal rigidity can serve as a brake on making use of new or enhanced systems. Battalion-level exercises are the norm for most developing nations, and most will lack any proficiency at conducting joint exercises and combined arms operations.

(U) To balance the demands of responding rapidly to local or regional contingencies while maintaining a capability to mobilize for large-scale war, many states are adopting a tiered readiness structure. They are maintaining a relatively small but well-trained and equipped portion of the force at high readiness, while keeping the bulk of the force at cadre or pre-mobilization status.

(U) In the less developed world, ground forces will remain the primary means of armed combat, and many of these forces will be equipped with more sophisticated...

"The emperor sent his troops to the field with immense enthusiasm; he will lead them in person when they return."
— Mark Twain

(U) German infantryman participates in NATO field exercise.

(U) Egyptian armor units, although reasonably well equipped, receive little large-scale unit training.
and capable weaponry. The actual battlefield effectiveness of newer systems will be reduced by persistent shortfalls in training, maintenance, support, and low morale; however a unique operational environment can provide a compensating advantage.

(U) Although somewhat dependent on economic constraints, major armies will selectively improve their tanks and fighting vehicles with:

- Western fire control systems
- Night vision devices
- Russian add-on passive or reactive armor
- Threat warning and obscurant systems
- Active protection systems coupled with defensive aid suites

(U) With such improvements, developing nations can extend the battlefield utility of aging and obsolescent weapons platforms against more modern counterparts.

(U) The main armament of ground fighting platforms will be characterized by greater range, accuracy and lethality of munitions. Globally, ground force development and composition will begin to take into account the growing frequency of armed encounters in urban areas by tailoring forces to meet the demands of these contingencies. So potentially useful are cities to asymmetrically oriented military forces, that opposition forces will withdraw into urban environs and cede the surrounding territory when faced with U.S. military intervention.

(U) Czech Army T-72 CZ prototype.

(U) South Korean T-80 tanks.
Naval Force Trends

(U) The foreign naval threat in the next 20 years will range from general warfare threats in the littoral environment to unique threats found in operations other than war. Naval warfare will continue to be diverse and complex because of the variety of adversaries, situations, and force capabilities that will challenge U.S. naval forces during the execution of their overseas presence and warfighting missions. The foreign naval threat will consist largely of older platforms and weapons systems; however, a growing number of modern, more capable systems will be available for backfit or new construction. No state will develop the capability to present a global maritime threat on the scale of the former Soviet Union.

(U) Most of the world’s fleets will consist of ships not larger than destroyers and frigates, although a select few will retain or build small to medium-sized aircraft carriers. New ship designs will emphasize improved multi-mission capability, endurance, reduced signatures, and increased system automation.

The threat from submarines will be considerably diminished; however, it will remain important in coastal waters to which many smaller navies are confined. Although their capabilities continue to decline, Russian submarines and weapons will continue to be the pacing undersea technological challenge to U.S. maritime capabilities.

The threat from torpedoes is expected to increase as older obsolescent weapons are replaced with higher quality, advanced torpedoes. Wake-homing torpedoes are expected to remain the primary threat to surface ships throughout the next 20 years. Highly sophisticated, counter-measure-resistant, acoustic-homing torpedoes will pose the predominant threat to submarines.

The mine threat will increase as maritime forces continue to see mines as cheap and effective weapons against ships and submarines. Most countries will continue to use ships as their primary naval deployment platform, although by 2020 a greater number will use submarines and aircraft in the mine-laying role. There also will be increasing numbers of more expensive, sophisticated, propelled-warhead mines, such as encapsulated torpedoes. Mine fields using such mines will cover significantly greater area than in the past.

A number of factors are making AntiShip Cruise Missiles (ASCMs) increasingly attractive to naval forces, including the variety of systems available for purchase, their relatively low cost, and the improving capability to precisely strike targets at long range, while at the same time countering defensive systems.

The French La Fayette Class Frigate is one of the latest in a generation of stealth ships. It is also available for export and has already been purchased by Saudi Arabia and Taiwan.

"It is not the business of a naval officer to write books."
— RADM F.H. Ramsay endorsing an unfavorable fitness report on Alfred Thayer Mahan in 1893
(U) Future Indian Shishumar Class Submarine (German type 209/1500).

<table>
<thead>
<tr>
<th>Selected Future Submarines Operational by 2020</th>
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<tbody>
<tr>
<td>Type</td>
</tr>
<tr>
<td>Dolgorukiy SSBN</td>
</tr>
<tr>
<td>Severodvinsk SSN</td>
</tr>
<tr>
<td>SSBN-P-1</td>
</tr>
<tr>
<td>SSN-P-1</td>
</tr>
<tr>
<td>ATV SSN/SSBN</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Selected Major Countries with Submarine Forces in 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russia</td>
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<tr>
<td>Iran</td>
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<tr>
<td>UK</td>
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<tr>
<td>Israel</td>
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<td>Australia</td>
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<tr>
<td>India</td>
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<tr>
<td>Algeria</td>
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<tr>
<td>Japan</td>
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<tr>
<td>Chile</td>
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<tr>
<td>Yugoslavia</td>
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</table>
Air Force Trends

(U) Over the next 20 years, global aircraft inventories will continue to decline in numbers, but residual aircraft will tend to be more technologically capable and lethal. The increased capability will result in part from their extended range, multi-role mission capability, and multiple engagement capability. The proliferation of advanced air-to-air missiles, precision-guided munitions, cruise missiles, and “smart weapons” also will increase the defense and strike capability of air forces globally. Most countries will focus on modified and upgraded versions of proven airframes. Overall, however, resource shortfalls, training deficiencies, and inadequate C’I, EW, support and maintenance capabilities will limit the combat effectiveness of most air forces.

Unmanned aerial vehicles (UAVs) will be used increasingly for surveillance, reconnaissance, and ultimately strike missions. Low-cost systems, with a flexible payload and long time-on-station capability, will be called on for missions in high-threat situations, or where sustained coverage is necessary. Today’s advanced technologies probably will be off-the-shelf technology in 2020 and readily available worldwide.

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Projected 4th Generation Upgraded and 5th Generation Aircraft

<table>
<thead>
<tr>
<th>Aircraft</th>
<th>Producer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typhoon (Eurofighter)</td>
<td>Europe (Italy, Spain, Germany, UK)</td>
</tr>
<tr>
<td>Rafale</td>
<td>France</td>
</tr>
<tr>
<td>Mirage-2000</td>
<td>France</td>
</tr>
<tr>
<td>Su-37 Berkut</td>
<td>Russia</td>
</tr>
<tr>
<td>Su-30MK1</td>
<td>Russia</td>
</tr>
<tr>
<td>Chinese new fighter</td>
<td>China</td>
</tr>
<tr>
<td>Gripen</td>
<td>Sweden</td>
</tr>
</tbody>
</table>

(U) JAS-39 Gripen Fighter.

(U) SU-37 Berkut Fighter.

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Selected UAV Producer Countries

<table>
<thead>
<tr>
<th>Iran</th>
<th>India</th>
<th>Russia</th>
<th>China</th>
<th>North Korea</th>
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<tbody>
<tr>
<td>Argentina</td>
<td>Australia</td>
<td>Canada</td>
<td>France</td>
<td>United Kingdom</td>
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<tr>
<td>Germany</td>
<td>Italy</td>
<td>Japan</td>
<td>Israel</td>
<td>South Africa</td>
</tr>
</tbody>
</table>

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"Airplanes are interesting toys but of no military value."

— Marechal Ferdinand Foch, Professor of Strategy, Ecole Superieure de Guerre
Air Defense Force Trends

(U) Many nations, cognizant of the advantages afforded those potential opponents possessing superior air warfare capabilities and faced with the high cost of acquiring airborne defenses, will place a high premium on improving their ground based air defenses. However, while across-the-board upgrades in missiles and sensor capability will occur, most states will be unable to acquire and field integrated air defense networks and systems, which will limit operational effectiveness of the new technologies.

Tactical SAM technologies will continue to improve, including more sophisticated seekers, sensors, propulsion, guidance and control, warhead/fusing, signal processing, and acquisition and tracking devices. These changes will place significant demands on the countermeasures development community.

Air defense artillery (ADA) will continue to augment point defense of high value targets. Advanced all-weather, night, and fused-data capabilities will make traditional ADA weapons a durable threat to air operations throughout the forecast period. Increased numbers of combined gun and missile air defense systems will appear, many through integrating existing ADA guns and man-portable air defense systems (MANPADS) or short-range SAM systems. ADA will increasingly be expected to effectively counter precision guided munitions and cruise missiles.

Short-range air defense coverage will be accomplished by MANPADS, short-range SAM systems, and AAA systems. Defense forces will operate these weapons in highly mobile units, fired by an individual soldier or from specialized vehicles. Their association with advanced surveillance equipment and C4I systems will enable these previously limited systems to become increasingly lethal at providing point defense.

Air defense laser weapons, capable of blinding pilots and aircraft optical sensors, and inflicting structural damage to weapons platforms, are likely to be deployed by 2020 by Russia and possibly China. Some pilot-blinding weapons may be deployed earlier.
Missile Trends

By 2020, North Korea, Iran, and — depending on sanctions — perhaps Iraq will likely have joined the “ICBM Club,” with a variety of payload options. Pakistan and India will be constrained from joining primarily by a decision to do so. India could convert a SLV into an ICBM in 2-5 years given such a decision. China will have deployed at least two new ICBM systems by 2010. Proliferation of ICBM systems should also be considered given the current willingness of such countries as North Korea to export missile technology. It seems more likely now that Iran, Pakistan, and eventually Iraq and other countries of concern may be able to purchase or indigenously develop and produce components for an ICBM in the next decade, based in part on the North Korean success with the Taepo Dong I in 1998.

“Since the beginning of the 20th Century the whole idea of distance has changed. This alteration in spatial values came about in little more than a single generation... The ruling idea of the Germans in the conduct of this war (WWII) was speed. We (The French) on the other hand, did our thinking in terms of yesterday or the day before.”

— Marc Bloch, Strange Defeat

(U) Indian Prithvi SRBM.

(U) Pakistani Ghauri MRBM Missile.
Missiles with ranges 3,000km and under are also considered Theater Ballistic Missiles (TBM).
ICBM — Intercontinental
  Ballistic
  Missile

IRBM — Intermediate
  Range
  Ballistic
  Missile

MRBM — Medium
  Range
  Ballistic
  Missile

SLBM — Sea/Submarine
  Launched
  Ballistic
  Missile

TBM — Theater
  Ballistic
  Missile

LACM — Land
  Attack
  Cruise
  Missile

ALCM — Air
  Launched
  Cruise
  Missile

SLCM — Sea
  Launched
  Cruise
  Missile

"India has reached a stage
where nobody from anywhere
would pose a threat."

— George Fernandes
Indian Defense Minister
(After spring 1999 Agni missile tests)

Iraq's Al Samoud SRBM will
have a maximum range of
140km with a projected
payload capability of 300kg.
Regional and cross-regional coalitions will share ballistic missile technologies and production capabilities. Future deployed or developing systems will have increased range because of lighter and stronger materials and advanced propellants. Enhanced accuracy of future missile systems will be possible by the use of improved guidance instruments and navigational aids that already are available or in development. A few countries may prove innovative in their launch capabilities. Future conflicts probably will involve the use of these weapon systems with WMD, including nuclear weapons.

(U) The KH-35 represents Russia's most advanced cruise missile technology, and will have both air and surface launched variants.
Space-Based Systems Trends

(U) The space systems of 2020 will be much more capable and more widely used than the current space systems. Almost 20 years ago, fewer than a dozen countries had national satellite systems. Today, 24 countries have them, and by 2015, nearly 40 countries will have their own satellites. International consortia will have an increasing role in space exploitation and developing space systems. By 2020, more than a dozen commercial entities could provide both launch and satellite services. Such activity will dramatically increase the quantity and quality of space services—especially for global mobile satellite communications and space-based imagery—available to any country on a commercial basis. The application of these services has the potential to vastly enhance the military capabilities of many nations.

Already under development are private launch capabilities such as the Sea Launch Project that will use a modified mobile oil rig to conduct launches from the South Pacific Ocean. Consortia will place imagery and geospatial data platforms in space as well as a wide assortment of communications platforms. While the timeliness and resolution of commercial satellite imagery may not be as militarily useful as national programs, the number of satellites in orbit, and the quality and quantity of imagery provided, will increase dramatically. Currently there are about 200 commercial communications satellites in orbit. By 2005, this number could easily be well over 1,000. This rapid access of information through space will change not only how we live but also will change how we conduct war. The large increase in satellites is a result of the advent of multiple commercial ventures for small versatile communications satellites. The proliferation of such satellite communications services will have dramatic impact on the communications architectures of many developing nations and may significantly enhance the tactical command and control capabilities of foreign military units using them.

Increased foreign military space capabilities will erode the relative military advantages the United States enjoys in satellite reconnaissance, communications, navigation, and other space-based capabilities. However, the U.S. will remain the dominant space power throughout the forecast period. Russia almost certainly will remain the second most capable space power during this time. Europe, China, and possibly India and Japan, will all vie for the next position.

Potential future adversaries will be able to disrupt, defeat, or degrade the missions of some U.S. satellites through jamming equipment.
(U) With increasing human presence in space over the decades to come, “space weather” will be of greater concern for operations in space. Platforms will be susceptible to degradation and limited damage from cosmic sand-size particles and solar wind. The level of dependency by national defenses on these space based systems will dictate the level of concern. The issue of space debris, especially with the huge increase of satellites in orbit at risk of collision, will also be of greater concern.

(U) Between 2003 and 2005, the International Space Station (ISS) should achieve full operational readiness — 100 years after the Wright brothers’ first flight. This expanded human presence will further broaden our security interests in space. Foregoing ISS participation, China probably will be operating both a small space station and a supporting space plane by 2015. In light of the trends projected through to 2020, consideration will have to be given to the declaration of security responsibilities in this eventual area of responsibility for our armed forces.

“Don’t tell me man doesn’t belong out there. Man belongs wherever he wants to go — and he’ll do plenty well when he gets there.”

— Werner von Braun
Science And Technology Trends

(U) The dominant trend in both military and civilian technology in the next two decades will be the application of automation and information processing technology to every aspect of professional and personal life. In the military arena, this will increase the speed, precision, range, and efficiency of every action, from targeting to maneuver to logistics. Even mid-ranked militaries will be able to use commercial off-the-shelf technology to operate more sophisticated command and control networks, while advanced militaries will connect information networks to every weapon and platform to achieve highly-integrated “network-centric warfare.”

(U) At the cutting edge, weapons based on new physical principles may be available by the second decade of the new century. These include electrodynamic weapons, thermonuclear explosives, radio frequency weapons, and effective ballistic missile defense systems.

(U) Implementation of very advanced weapons systems and weapons platforms will proceed at a slower pace, primarily due to the fact that globally, defense spending and military R&D remain below their 1980s levels. However, technologically advanced conventional systems developed in the 1990s will proliferate gradually. These systems will consist primarily of fifth generation fighter aircraft, space-based reconnaissance systems, stealthy cruise missiles, armored vehicles with active defensive systems, and artillery/radar systems capable of rapid counter-battery responses.

(U) Barring a resumption of hostile relations among major economic powers, it is unlikely that any nation will invest in the rapid modernization and fielding of large numbers of these very advanced systems, but selected, limited upgrades will occur.

(U) Key technological innovations with potential military application include new bio-mechanical manufacturing processes, using the tools of bioengineering to mass produce molecular scale mechanical systems at low cost. By the second decade of the next century, radically different tools for military conflict will begin to develop from the merger of applied biotechnology, miniaturization of electro-chemical and electro-mechanical systems, and the ubiquitous application of information technology. Possible applications include:

- Tailored biological agents, disseminated widely but activated only in very specific circumstances to achieve desired non-lethal (limited) effects on personnel or materiel.

The greatest surprise we may encounter is the fielding of a very limited high technology capability by an opponent ... that we did not anticipate.

“Any sufficiently advanced technology is indistinguishable from magic.”

— Arthur C. Clarke

(U) Micro chemical analysis “lab in a pea pod” (acoustic sensor, vapor concentrator, and compact disc analyzer).
Miniature robotic devices — sensors, weapons, or both—with enough computing power on board to sense and respond to their environment, communicate and receive instructions, and react to unexpected developments.

- Systems that use or mimic biological processes to generate power (photosynthesis, adenosine triphosphate cycle), to move and communicate, and to sense the environment.

(U) The availability of advanced systems on the commercial market constitutes a vast shift from the Cold War era. At that time we believed our opponent to be operationally competent, as were we, so the advantage went to the side with superior technology and force structure. In the coming decades, opponents may be able to obtain almost any cutting edge technology or service in the open market. The advantage, therefore, will go to the side that is more competent in applying that technology—in terms of organization, doctrine, tactics, training, and logistical support—to generate superior force on the battlefield.

These developments signal the rise of a military technoculture in which time, space, speed, and other fundamental conditions are radically changed.

(U) Carbon Nanotubes.
(U) Robotic Surrogate.
Global Technology Comparisons

The U.S. and its allies are in a very favorable position in terms of advanced technology development, a factor that will continue to impact military developments. The graphic to the left depicts 9 critical technology areas. Potential adversaries recognize their general technological disadvantage in most of these areas and will seek to overcome this deficiency by actively pursuing opportunities for technology transfer, developing asymmetric and asynchronous means to counter technologically superior forces, and developing niche capabilities designed to counter specific technological components of U.S. and allied forces.

"Let me assure you, you will not see people fly."
— Minister Milton Wright (father to Orville and Wilbur)  
September 1903
"You can't say civilizations don't advance... for in every war they kill you in a new way."

Will Rogers
VI. Future Warfare

Overview

Although the fundamental purpose of warfare is unlikely to change in the decades ahead, the conduct of war will be far more complex than it is today. Many armed forces will operate predominately with late 20th century armaments, but with a smattering of technologically advanced weapons and platforms. This condition will present significant challenges for the U.S. military, which will operate against a wide variety of weapons across the entire spectrum of conflict. Limited conventional warfare remains likely at the regional level, but even there the rapid urbanization of much of the developing world will create a new dynamic with which U.S. forces must contend. The dynamics of future warfare will include the decisions and actions of technical managers as well as warriors and political leaders who use the technology. Future war will involve individuals, groups, and states with unique capabilities to pursue their strategic goals and interests.

New applications of warfare will complicate this turbid situation. The lessons of Operation DESERT STORM and subsequent operations in Southeast Europe have not been lost on our adversaries, who in the future will be far less likely to array conventional forces or fixed unprotected targets against the United States. Instead, these adversaries will choose to employ asymmetric and asynchronous forms of warfare against the U.S. and our allies. Terrorism, weapons of mass destruction, information operations, and infrastructure warfare are just some of the more prominent examples of asymmetric forms of attack. The potential for anonymity in asymmetric warfare further complicates the problem, for in most instances a degree of time is required to establish a perpetrator’s identity, forcing the U.S. into an increasingly asynchronous condition in terms of a response. The more asynchronous the response, the harder it becomes for the U.S. to make a strong case in the eyes of world opinion, thus jeopardizing victory in the battle for the observing public’s perception.

The combination of new and traditional applications of warfare, as well as the technological redefinition of the notions of speed and tempo, space, time (technotime — where things happen much faster than in the past), and distance, are forcing a radical change in our doctrinal concept of “battlespace.” The result will be a non-linear and highly interactive environment in which our adversaries, although nominally weaker than the U.S., will attempt to gain circumstantial advantages. Understanding this new dynamic of war is thus critical to understanding the future threat.
(U) The doctrinal concept and the reality of battlespace has and is changing. Space (area), time and distance have taken on different values because of the nature of weapons and the tempo of modern military operations. The pervasive nature of the electromagnetic environment, the use of exoatmospheric space and the undersea inner environs in operational warfare, and the evolution of cyberspace as an element of the environment and as a dimension in which to engage in conflict, have all contributed to this change.

(U) U.S. capabilities, when juxtaposed against potential enemies, seem powerful, indeed, dominant. However, circumstantially our adversaries can (and will) achieve some technical or procedural capability about which we must know and be able to counteract in advance of its use to preclude unnecessary casualties, threatening conditions, and surprise.

Understanding the new dynamic of war is critical to understanding the future threat.
The Art and Dynamics of War

(U) The foundations of war may not fundamentally change, but the functional concepts and the nature of war constantly take on new dimensions, increasing in complexity as technology and geopolitical circumstances evolve. Each passing generation contributes to the evolution of warfare with advancements in technology, weapons, tactics, and doctrine. These changes are integral to the evolution of battlespace. From sling shots in the Gaza, to advanced infantry weapons firing both high explosive and kinetic energy rounds, to war in cyberspace, all must be considered and understood in order to effectively function in the current and future conflict environment. The dynamics of future warfare will include the decisions and actions of technical managers as well as the warriors and political leaders who use technology. Future war will involve individuals and groups who seek simple survival, as well as individuals, groups, and states with unique capabilities to pursue their strategic goals and interests.

(U) Future opposing forces will be hard pressed to match our dominant maneuver, power projection, and precision engagement capabilities. Most would prefer not to engage in traditional conventional warfare with the U.S. But in actual combat situations, the degree to which these forces pose a threat will depend on a number of factors. Such factors include the ability to absorb and apply key 21st century technologies, which will be crucial to combat performance, as well as to overcome deficiencies in training, leadership, doctrine, and logistics. As with any combat scenario, the specific operational-tactical situation and the geo-political and natural environment will also be significant factors in overall performance.

"War is a brain-spattering windpipe-slitng art."

— Lord Byron

(U) French soldiers test the prototype PAPOP (Future Individual Armament) multi-weapon/multi-ammunition system.
"The leader must not permit himself to be paralyzed by this chronic obscurity. He must be prepared to take prompt and decisive action in spite of the scarcity or total absence of reliable information. He must learn that in war, the abnormal is normal and that uncertainty is certain."
— General George C. Marshall

(U) One of the key issues we must work to overcome and to guard against is technology surprise, where an opponent is able to develop, acquire and use a technology that may give them a circumstantial (lethal) advantage, which we did not anticipate. Under the right conditions, their quantitative capability, combined with situational advantages—e.g. initiative, limited objectives, short lines of communication, familiar terrain, time to deploy and prepare combat positions, and the skillful use of asymmetric and asynchronous approaches—will present significant challenges to U.S. mission success.

(U) The dynamic and diverse global condition, the near-universal recognition of U.S. conventional military superiority, and the age-old interplay between war and peace, threat and response, offense and defense, and military art, science, and technology are fundamentally changing the nature of the threats we face, and the nature of warfare itself. It is nearly impossible to predict precisely how these factors will play out—in terms of the motives, vulnerabilities, capabilities, timing, locale, and technological sophistication of specific threats. Nevertheless, by recognizing vital U.S. interests, understanding why people, leaders, and states engage in warfare, and acknowledging the interaction between a potential enemy’s goals, capability, intent, and will, it is possible to discern the outlines of a new threat paradigm and to assess emerging warfare trends and methods.

(U) Palestinian youths use sling-shots against Israeli soldiers in the Gaza Strip.
We have lost the relative stability of the Soviet-era bi-polar world, and we have inherited a multi-polar disorder of Byzantine proportion.

**NEXUS**

(U) The future conflict environment is multi-dimensional and non-linear and exquisitely ambiguous. There have always been a host of factors influencing the specific nature of conflict. Throughout history, national will, geo-political and socio-cultural factors, political direction, technology, elements of military power, military force, and economic strength have all worked simultaneously and interactively to affect how and when groups of people have engaged in warfare. These interwoven factors, taken as a whole, are in turn affected by the external environment, and the specific context in which they are operating, to produce the fabric of a potential conflict environment. In the decades ahead, space, time, distance and other elements of the dynamic of war will continue to be altered through technological innovation, thus changing the relative importance of individual factors and intensifying the overall nature of the conflict dynamic, and ultimately driving us toward an uncertain future.
Categories of Conflict

UNCLASSIFIED

RANGE OF POTENTIAL CONTINGENCIES

Most Likely

CONFLICT SHORT OF WAR
Military Counter Assistance Drug
Counterr Insurgency

Least Likely

Conventional War
Limited Nuclear War
Global Nuclear War

Infrastructure/Information Warfare
Information Operations

Chemical/Biological Warfare

Peace Operations
National Assistance
Peacetime Engagement
Operations Other Than War
Other Operations

ASYMMETRIC WARFARE

CONFLICT SPECTRUM

(U) The range of contingencies on the chart above covers the generally accepted spectrum of conflict in which the U.S. could become involved. The items on the left of the chart are not only most likely to occur, but are activities in which we are engaged today in a variety of places and ways. Those items on the far right of the spectrum, limited and global nuclear war, are not only unlikely to occur, but if they did occur they would so radically alter the global condition that the traditional constructs would no longer apply. In the middle of the chart is a break that separates the kinds of conflict that are more likely and those that are less likely. International terrorism can be expected throughout the spectrum of conflict, and will remain a major transnational political and societal problem, but primarily will influence conflict at the lower end of the spectrum. Similarly, infrastructure/information warfare and chemical/biological warfare transcend all the categories of conflict shown. In future conflicts, some form of chemical or biological warfare is probable, generally within the context of very limited use and very restricted kinds of conflict. Asynchronous and asymmetric warfare are ancient in origin; however, recently we have developed a much better doctrinal understanding of their impact. Due to our military superiority, adversaries are likely to engage in asymmetric forms of warfare, and the nature of asymmetric warfare often dictates an asynchronous response. For the foreseeable future, these conditions will influence the way in which the U.S. is challenged and the way in which the U.S. responds. Finally, the activities listed in the lower-left hand corner of the chart represent non-traditional employment of U.S. military forces. Whether or not one agrees philosophically with their inclusion among military missions, they are a reality and potentially impact our ability to field combat-ready forces at any particular moment in time.
INDUSTRIAL-AGE WARFARE

(U) Well into the next century, industrial-age warfare will survive as one of the main elements of conflict. Indeed, industrial-age militaries will abound, although some will have advanced niche capabilities and components. The massing of conventional forces will occur on the battlefields of future regional conflicts, but not to the degree that has occurred over the past 200 years. Less developed nations may seek asymmetric—although not necessarily high-tech—means to counter the dominance of their opponents and will rely on more affordable means provided by non-traditional means to deter, defend or attack or defend against adversaries. This correlation exists in potential future hostilities between Iran and Iraq or India and Pakistan over the next 5 to 10 years. Beyond 2005, nuclear deterrence probably will play an increasing role for these and other adversarial relationships. Limited employment of small conventional forces will occur with much greater frequency than will mass engagements. These limited employments will be more indicative of local conflict involving states and groups that are deficient in sustainment and power projection capabilities. They will engage in shorter duration conflicts with intermittent clashes involving small numbers of ground and air assets. Battles on the water will continue to be primarily limited to coastal and riverine environments. For the foreseeable future, guerrilla tactics and terrorism will play a major role in limited engagements or low intensity conflicts, and in some situations, “hit and run” operations will be the only state of play between warring factions. Air power and missiles will constitute critical strike capabilities in nearly every imaginable conflict.

(U) Industrial-age warfare will remain problematic for the U.S. and its partners as diplomats or military leaders are required to intervene through peace brokering and enforcement. Some low-level conflicts will be [and have been] overlooked because they may not be easily addressed or lack sufficient magnitude to warrant international attention. This phenomenon carries with it the risk of slow build-up to conflict escalation, expansion to neighboring states, refugee flows, and internal genocide. Because these types of unstable environments will flourish in the next 10-20 years, U.S. forces will continue to be involved to some degree in this often local and low level—yet dangerous—form of conflict.

URBAN WARFARE

(U) By 2020, slightly more than half of the world’s population will live in urban or built-up regions. The challenge to society from large-scale urban zones comes not merely from the concentration of people but rather the inability of infrastructures to handle the large numbers. In less developed regions in Africa, Latin America and Asia, new urban dwellers arrive with few skills, little education and without the basic economic wherewithal to survive and thus contribute to the dysfunctional nature of the urban center. This situation provides for a very complex environment for military operations. Future operational forces
Q: “Can you tell me how battle works?”
A: “Well, in my opinion battle never works; it never works according to plan... The plan is only a common base for changes. It’s very important for everyone to know the plan so you can change easily. But the modern battlefield is very fluid, and you have to make your decisions very fast — and mostly not according to plan.”

Q: “But at least everyone knows where you’re coming from?”
A: “And where you’re going more or less.”

— Gen Dan Laner, Israel Defense Forces Commander Golan Heights, 1973

deployed to such areas will need to be trained and experienced and to understand the dynamics of the urban construct. These forces will have to function not only in and around large structures but in the more difficult surroundings of shacks and shanty towns. These slums can become epicenters of instability disease, hunger and at times discontent and conflict.

In the future, forces deployed to urban or built-up areas will have to cope with a potential spectrum of players that includes insurgents, refugees, criminals, governmental authorities and the core citizenry itself. The nature of the environment, and the citizen’s knowledge of that environment, will complicate or assist U.S. actions, especially intelligence, logistics, and peacekeeping operations. Potential targets will be fluid and hard to single out, increasing the risk of target misidentification and collateral damage. Arcane information such as the location and capacity of water mains, electrical conduits, telecommunication cables etc. will be vital to engaging forces, giving them a tactical and perhaps strategic advantage. During 1993 operations in Mogadishu, Somalia, hostile targets included garages, old factories, and former hotels.

The usefulness of conventional military equipment will be limited and in some cases a liability. The Russians found this to be the case in Chechnya, where armored vehicles were frequently defeated by the effective use of small arms and improvised weapons. In urban warfare, low-tech problems will not easily be solved with high-tech solutions. The majority of the supporting infrastructure for military operations will have to be transported to the area of operations because of the high probability that the indigenous infrastructure will be insufficient or non-existent or caught up in the conflict. In short, urban warfare will complicate tactical procedures and logistic considerations and tax personnel resources, and will present difficult political and human problems for us to solve. There is a high probability that U.S. forces will increasingly be deployed to urban environments over the next several decades.

**ASYMMETRIC AND ASYNCHRONOUS WARFARE**

(U) Asymmetric warfare is the current label for a practice as old as warfare — attack the enemy’s weaknesses, perhaps with unexpected or innovative means, while avoiding his strengths. If done well, asymmetric attacks are unexpected and difficult for con-
“Hence that general is skillful in attack whose opponent does not know what to defend; and he is skillful in defense whose opponent does not know what to attack.”

— Sun Tzu

Conventional military forces to counter. Because of our dominant military position, the U.S. and our allies are likely to encounter asymmetric strategies as weaker adversaries attempt to advance their interests and avoid a direct military engagement on our terms. At the same time, the United States enjoys many asymmetric advantages over a potential opponent, notably rapid decision and execution cycles, high operational and strategic mobility, precision deep strike, and superior battlespace awareness.

(U) Asynchronous warfare involves a preselected or delayed attack on an adversary, taking advantage of the passage of time to develop a strategic opportunity or to exploit a future vulnerability. Human or technical assets are strategically placed well before the actual confrontation, sometimes years before. In a delayed attack, often an act of reprisal, the operation is carried out after an offender has lowered his guard, months or even years later.

One classic case of asymmetric/asynchronous warfare occurred in 1995. Egyptian terrorists attempted to assassinate Egyptian President Hosni Mubarak in Addis Ababa, Ethiopia. Their mission was clear from the start: to identify the best location from which to launch a terrorist ambush against President Mubarak’s entourage during the 1995 Organization of African Unity [OAU] meeting, which was to take place in Addis Ababa. Similar asynchronous activities surround the bombing of the U.S. barracks in Daharan, Saudi Arabia in 1997 and the 1998 embassy bombings in Tanzania and Kenya.

(U) Selected defensive asymmetric strategies include denial and deception, the use of underground facilities, and the threat of NBC weapons.

Denial and Deception

Although foreign capabilities are expected to continue to improve over the next 20 years, the scope, pace, and qualitative level of these improvements will vary among countries.

This improvement will depend on foreign countries’ understanding of U.S. strategy, doctrine, communi—
These countries will increasingly integrate automated information systems and the Internet into their D&D plans. The expanding availability and timeliness of the Internet also will provide states with an efficient mechanism to directly target the perceptions of key U.S. and allied civilian and military decision-makers and to bypass the conventional intelligence cycle.

Russia will continue to emphasize protection of its strategic nuclear forces, WMD programs, proliferation activities, and advanced military projects. Russia also will continue to improve its post-Soviet information security and related countermeasure controls as it becomes used to a more open society.

D&D activities in support of Iraqi, Iranian, Libyan, Pakistani, and Indian WMD programs will continue to
be national priorities. In particular, North Korea will continue to develop D&D measures in support of its WMD program, and to complicate and degrade U.S. and South Korean indications and warning capabilities. Other countries will increasingly represent D&D challenges over the next 20 years, as will non-state actors, terrorist organizations, organized crime, and narco-traffickers.

**Underground Facilities**

Increasingly, rogue states and other nations of critical interest to the U.S. are digging deep into mountains and below the surface of the earth to conceal and protect key programs — particularly WMD and missile delivery systems — as well as leadership, command, control, and communications. Many countries also house strategic military production operations in tunneled facilities. In addition, countries such as Russia, China, North Korea and Cuba make extensive use of underground complexes for storage and operational launch sites for ground, naval, and air assets.

**UNCLASSIFIED**

**Baghdad Bunker**

Shelters designed by Swiss or German companies reportedly were built under several official buildings in Baghdad. Here is a typical bunker design.
(S/NF) Russia, China, and North Korea and some other states (Cuba, Libya), already have well-established deep underground infrastructures. Over the next two decades, they will slowly carry out new construction—probably in support of upgrading or replacing current underground facility infrastructure considered vulnerable or outmoded, and also to support new follow-on high-value military programs such as WMD and ballistic missiles.

(S/NF) The continuing growth of deep underground facilities in Iran, Syria, Libya, India and Pakistan and the initiation of deep underground facilities in Iraq—currently only known to possess shallow underground facilities—is expected over the next two decades. All these countries have burgeoning WMD and ballistic missile programs, and they continue to incorporate deep underground facilities into these infrastructures. As more countries commence or expand NBC weapon programs and missile capabilities, the number of underground facilities to conceal and to protect strategic assets is likely to grow.

Nuclear, Biological, and Chemical Warfare

(U) The likelihood of a chemical or biological attack—and to a lesser extent, a nuclear threat—increases with the changing nature of warfare and the recognition that asymmetric responses to conventional military dominance can achieve measurable results. Actual or threatened use of NBC warfare places significant stress on both troop morale and national decisionmaking confidence. Protection measures against NBC warfare attacks make it difficult to carry out military missions because they restrict vision, add weight and time, and increase stress. Further logistic burdens are added by the need for decontamination equipment, detection gear, and specialized reconnaissance devices and vehicles. Training is a precursor to effective counter-NBC activity, and few nations have effective training programs.

INFORMATION OPERATIONS

(U) As information technology becomes ubiquitous in military and commercial applications, efforts to attack or manipulate the opponent’s information systems, and defend one’s own systems against attack, will become an increasingly important part of warfare. Attacks will occur on the information in the systems as well as
on the macro-system and the human users of the systems. Information will be subject to destruction and manipulation in order to achieve political, economic, and military objectives. The ultimate target will be the decisionmakers and planners who use the information and information systems.

(U) The global information infrastructure (GII) will become a central factor in the future security environment. As more and more aspects of political, economic, and military life around the world are embedded in the GII, concerns about the reliability, privacy, and safety of computer networks will continue to grow. In the United States, the GII is subsuming the national information infrastructure (NII). According to a recent study, the basic functioning of the United States as a sovereign nation in terms of its ability to protect the lives and livelihoods of its citizens is at risk because of our increased dependence on the electronic information technologies that make up the NII.

(U) Over the next two decades, nations will increasingly emphasize IO offensive and defensive strategies, doctrine, and supporting measures, resulting in a significantly increased IO threat to U.S. interests from other states. Managing risks associated with protecting the GII from IO attacks will increasingly become a long-term global issue.

(SNIP) U.S. information systems are continually being attacked in the form of probes and intrusions for information and vulnerabilities by unknown sources; in hacker conferences and on computer bulletin boards on the Internet. These hacker tools have become increasingly user-friendly in the past 5 years. New means for surreptitiously inserting malicious software into computers are becoming more widely known among hackers and others interested in attacking information systems. In addition, encryption technology needed to mask these computer network attacks and malicious programs is readily available on the Internet. Moreover, creating computer chips embedded with malicious code no longer requires billion-dollar microelectronics factories.

"Invisible does not mean unreal."
—David G. Chizum

The nature of the attack may vary, depending on whether the attacker is hostile or merely attempting to steal U.S. technologies for economic gain. Numerous advanced nation-states are capable of mounting some level of IO attack, and their capabilities will continue
VI. Future Warfare

Categories of Conflict

(U) Computers are increasingly important to managing complex systems and processes ... and will be increasingly subject to attack.

(b)(1), 1.4 (c)

to improve. The technology base currently prevalent in the techno-info world will provide the information tools for sophisticated IO attacks on the GII. In the future, China, India, Singapore, South Korea, Indonesia, and Malaysia will more than likely add to the production of these information tools. Virtually every nation involved in espionage is seeking to exploit computer networks.

(S/NF) The technology required for IO attacks against and on the digital superhighways continues to become increasingly capable, available, and affordable. Moreover, some strategic aspects of IO, such as psychological operations and D&D, do not depend on advanced technology directly. Small high-powered microwave devices and electronic warfare jammers are commercially available.

(b)(1), 1.4 (c)

Another area to be targeted might be the reliance of financial markets and institutions on information technology. Economic targets currently attract a great deal of talent and resources, and economic institutions spend correspondingly large amounts on defense against such attacks.

(U) The most dangerous avenues of information attack are from those with physical access to friendly information systems. The United States' greatest vulnerabilities remain:

- Trusted insiders, able to attack from within and gain expanded access without authorization
- Equipment modification during transport or storage
- Physical attack against key components or nodes
- Network penetration, including theft of data, insertion of disabling software, or covert modification of data to deceive or misdirect
- Electronic attack against sensors, communications links, or key nodes

"640K ought to be enough for anybody."

— Bill Gates, 1981

Low-tech explosives may also be used to destroy communications facilities in locations where physical access is possible. Others could rely on international print and radio/TV broadcast media to manipulate public opinion in support of a political victory when a military victory is not possible. The Vietnam war period, Somalia and other recent conflicts have provided some good examples of using media influence to manipulate public opinion.
Sophisticated cyber-attacks, including autonomous software agents, logic bombs, etc.

Perception management of decisionmakers, policy makers, and the populace

Cybernetic Warfare

(U) A new threat is growing in importance and incidence. In some ways it bears the traits of what might be called a form of "techno-terrorism." Cyber-terrorism involves improper and threatening use of information systems of all types to cause offensive and defensive conditions that preclude the effective, efficient, and applied use of those systems. Important aspects of IO are carried out in a dimension of the battlespace called cyberspace, in which the "weapons" are adversarial systems or applications, and ammunition is usually electrons that are directed in a hostile manner.

(U) This form of warfare will grow in importance as new methods become possible. IO's evolution is multifaceted and diverse. Fundamental to virtually all offensive or defensive IO is the idea that information can be affected in ways that can be advantageous to an advocate and damaging to an adversary. This type of warfare defies traditional rules of time and distance, speed and tempo, and size or scope of opposing elements.

(U) Adversary information operations in peacetime "no-conflict" circumstances may be more civil-criminal than military-adversary. This brings an added degree of complexity to the U.S. national response to such an event. Identifying the perpetrator of an IO attack can be difficult and usually will carry with it numerous legal and procedural concerns. The freedom from legal responsibilities is one factor that makes IO ideal for transnational actors.

INFRASTRUCTURE WARFARE

(U) A nation's or subnational entity's critical infrastructure generally comprises a few significant components: telecommunications, banking and finance, industry, water, transportation, energy (distribution as well as storage), emergency services, and continuity of government. Linkages and interdependencies among many of these components could significantly increase the impact of an attack on a single component. Threats to critical infrastructure could include those from states, independent or state-sponsored groups, international and domestic terrorists, criminal elements, computer hackers, and insiders.

Threat to critical infrastructures.
Accelerating rates of change will make the future environment more unpredictable and less stable, presenting our Armed Forces with a wide range of plausible futures. Whatever direction global change ultimately takes, it will affect how we think about and conduct joint multinational operations in the 21st century.
Overview

(U) The U.S. will remain the dominant global power for at least the next two decades, but individual nations will pose circumstantial and conditional challenges to U.S. national interests. Despite an enduring strategic nuclear weapons threat posed by Russia and China through at least 2010, the conventional threats facing the U.S. will be of a decreased order of magnitude. This near-term strategic hiatus provides a breathing space in which the U.S. gains time at a reduced risk.

CNN Russia and China contain vast resources and challenge the U.S. for opposite reasons: China because of its military and economic ascent, and Russia because of its decline in the same two areas. Iran, Iraq, and North Korea are also potential threats to the U.S., primarily due to their inimical stance towards the U.S., and their pursuit of weapons of mass destruction and systems to deliver them at great distances. In addition to the threat posed by individual nations, a host of transnational threats, some of the more prominent of which were outlined in Chapter Three, will exacerbate the global security environment. This primer has focused on the main line of thought, essentially providing our best estimate. There are, however, alternative outcomes possible for any region or circumstance, and some of those with significant global or regional ramifications are outlined in this section. The one constant in this sea of change is that the underlying turmoil and uncertainty in the security environment will continue to necessitate the worldwide employment of U.S. forces in low-intensity conflict environments and nontraditional roles including peacekeeping operations, humanitarian assistance, and the evacuation of U.S. and foreign citizens in rapidly deteriorating internal situations.

(U) U.S. Marine guards humanitarian aid supplies destined for victims of Hurricane Georges.
Key Challenges to the U.S.

NATIONAL THREATS

-China: China will continue to prioritize economic reform and development, but military modernization will proceed at a steady but gradual pace, resulting in across-the-board improvements from a very low baseline. However, China is still 20 years away from developing large-scale regional threat capabilities.

-North Korea: Worsening economic and internal security situations will steadily erode Pyongyang’s conventional military capabilities, but WMD, missiles, artillery, and SOF strike options will remain viable so long as the current political leadership survives. Significant change is likely within the next five years, with the worst case being major theater war.

-Iraq: Despite being constrained by sanctions and other domestic security issues for the next few years, Iraq will remain militarily capable relative to the GCC. So long as effective sanctions remain in place, Iraq will continue to downsize and consolidate its military, test UN/coalition resolve and capabilities, and have only limited ability to procure WMD.

-Iran: Economic, political, and social-demographic problems will constrain Iran’s conventional military development over the next two decades, but expanding WMD, missile, anti-ship and terrorist capabilities will create asymmetric/unconventional threats. Iran is a long-term regional problem.
TRANSNATIONAL THREATS

The United States will face a variety of transnational dangers: nontraditional threats to U.S. interests stemming from a variety of mainly extragovernmental entities and conditions that transcend international borders. The most important of these will be terrorism, migration and refugees, resource scarcities, drug trafficking, and transnational crime.

Terrorism, localized conflict, and asymmetric/asynchronous warfare will constitute our biggest ongoing problems. Asymmetric/asynchronous warfare will not be limited to nation-states, as non-state actors will take advantage of such measures to attack and counter the United States.

Over the next 20 years, important advances in technology will provide the potential for many countries to acquire or develop significant niche capabilities that will pose a circumstantially increased threat to U.S. forces. The technologies most likely to present such challenges will be nuclear, radiological, biological, and chemical weapons; ballistic and cruise missiles; defensive systems, especially air defenses; standoff weapons; space-based systems; and autonomous vehicles and munitions.

Through continued advancements in information technology and telecommunications, developing nations, groups, and individuals will have an improved understanding of the global condition. They will become more cognizant of their relative standard of living and will demand more from their leaders. This information-driven economic determinism could have a positive influence on political and economic reform efforts or a negative influence on countervailing aspects of the region.
Alternative Futures 2000-2020

(U) The future security environment described in this Primer encompasses the outcomes that seem most likely, given our current knowledge of economic conditions, technology trends, and the national priorities and threat perceptions of the major and regional powers. Forecasting is a notoriously inaccurate business, however, and some trends could produce significantly different outcomes than those already depicted.

(U) **Strong, hostile China:** After great economic success and increasing regional influence, China remains disillusioned by perceived U.S. opposition and containment and holds a collective “chip on their shoulder” view. However, such economic strength is possible only after a long period of international cooperation and outside investment. Thus a strong, hostile China is only possible in the latter part of the forecast period.

(U) **Russian economic/political collapse:** Russia’s failure to cope with the ongoing economic and political crisis results in a steady decrease of central control over the regions, particularly the hinterlands. Most of the regional rulers are authoritarian as well as extremely nationalistic. They are xenophobic and hostile to the West. The remaining vestiges of a central government continue futile efforts to control resources. Most worrisome is the total loss of control of the military/security forces and defense industries, and proliferation of WMD and critical technologies.

(U) **Strong, hostile Russia:** Toward the middle of the forecast period, successful economic reform promotes the resurgence of national power. Russia finances the regeneration of its military capabilities and pushes new R&D. Although it will not return to superpower status in this time frame, Russia is quite capable of regional power projection.
Strong, coherent Europe: European economic integration finally succeeds in fostering greater political cohesion. A central European government is able to develop and implement a robust European Security and Defense Identity. Europe is less dependent on U.S. leadership — though not hostile to the U.S. — and is more independent in its actions throughout the world.

Intra-European conflict: The 50 to 70 years of peace ends between major European powers. Major disagreements over failed economic integration, the Balkans, the Aegean, or other friction points result in major political/military tensions. There is a breakdown of consensus on security objectives, nationalist agendas surge, and open economic competition among European powers increases accordingly.

Increased power of hostile non-state actors: Criminal or terrorist organizations undergo a major increase in size through the acquisition of resources and congruence/merger of political, commercial, and criminal movements. These groups have greater access to high technology and advanced weapons and strategic information technology. They are centrally motivated by hostility to the U.S. or West. It becomes increasingly difficult to trace their connections or distinguish them from legitimate and non-legitimate activities and organizations.

Collapse of international structures: The IMF, World Bank, and UN are brought down by a combination of failures and inadequate financial support. Skepticism increases due to their ineptness, and the collective approach to economic/political/social problems falls out of fashion.

Global recession leading to significant economic transformation: Several key states fail to implement necessary structural reforms resulting in a chain reaction of competitive currency devaluations. The G7 is unable to cope, and protectionism rises around the globe. Enthusiasm declines for market reforms and U.S. leadership faces greater pressure. New and shifting alliances develop, and there is a global shift away from the Bretton Woods-era economic and financial arrangements.

Strategic anti-U.S. alliance: Two or more major powers (Europe, China, Japan, Russia, India ...) join together to oppose, undermine, and counter U.S. leadership, power, and policies around the globe.

Emergence of anti-U.S. leader or ideology: The perceived dominance of U.S./Western ideas, institutions, culture, presence, etc. gives rise to an ‘anti-American’ ideology that eventually enjoys widespread support as an effective counterpoint to U.S. dominance and provides a strategic ‘coincidence of interest’ among disparate individuals, groups, and states.

Removal of key U.S. allies: One or several key pro-U.S. leaders or regimes fail either through natural death, political successions, coups, or economic collapse. U.S. access to resources, markets, bases, and other strategic facilities in the affected region is severely curtailed or eliminated. Diplomatic efforts are hampered — both regionally and globally — in the absence of the compliant partner.
(U) Just over the horizon are numerous circumstances and situations that could alter our projections for the long-term. One of the most important issues is the dismal outlook for solutions to the underlying causes of smaller scale contingencies — which provides plenty of challenges to forecasting the future. Yet another is the millennial effect, which carries a low probability but with a potentially collective high impact. The evolution and outcome of these events require close scrutiny.

(U) Although there has been an increased effort by many nations to train and equip dedicated forces for nontraditional operations, the burden for projection and sustainability will fall on the Western countries. Declining defense budgets in many countries will further narrow realistic involvement to a select few, led by the U.S.

(U) U.S. forces in the Persian Gulf.

(U) Sierra Leone NEO.

OPERATIONS IN THE LOW INTENSITY ENVIRONMENT

(U) For the next 5 to 10 years, there will be no relief for U.S. forces from the current high tempo of operational activity. A wide variety of operations, such as peacekeeping, peace enforcement, counternarcotics, noncombatant evacuations, humanitarian operations, and routine training and presence operations, will place U.S. and allied forces at risk. Operational environments will range from relatively benign to non-permissive to overtly hostile.
(U) The upcoming arrival of the new millennium (Dec 1999 — Jan 2001) is likely to be more than just another year passing, instead providing a catalyst for disturbances in economic, social and political venues, the extent of which is difficult to anticipate. The Y2K computer problem is perhaps the most immediate manifestation of this period. The networked effect of widespread computer failures could have tremendous consequences for the delivery of basic services, especially in developing countries that have purchased advanced systems, but do not maintain the expertise to correct or manage such problems. The Y2K issue is also useful in illustrating the multi-dimensional character of the millennium dilemma, for there are those who perceive what are essentially computer chip design limitations as having greater societal or even religious significance. Additionally, there is a “millennial expectation” and a fear of the unknown linked to some religious beliefs that attribute deeper meaning to otherwise natural or random events. For example, destructive weather phenomena and natural disasters that would be seen simply as tragic events at any other time will be invested by some with apocalyptic implications. These factors, in conjunction with incidental events and unintended consequences, may combine to produce a net effect that could result in localized violence. This millennium angst could last up to two years given the discrepancies over the definition of when the new millennium actually begins.

“There is absolutely no substantive reason to withdraw large amounts of cash. But we all know that sometimes human actions are not based on logic.”

— Norman D’Amours
National Credit Union Administration Chairman
Time Line: 1999 – 2020

- Panama Canal Return
- Macao Return to China
- Europeanization Occurs
- Elections: Russia, Ukraine, Mexico
- START II Scheduled Implementation
- EU Accession
- Invasion of Kuwait 10 Year Anniversary
- World Population: 6 Billion
- Millennium Angel
- Y2K
- Human Genetic Blueprint Completed
- International Space Station IOC
- Competition for Resources Grows … Conflict Occurs
- Elections: South Africa

(b)(1), 1.4 (c)
This time line highlights selected events projected over the next two decades. It is not meant to be all inclusive.
Ponderables:

Those possibilities that one can imagine, but about which there is no clear evidence or supporting data that would prove their existence. However, historical data often "prove" the possibility.

Leaders will come and go. Some will rise to positions of exceptional power and influence.

There will be serious, even catastrophic, environmental events that may so radically change our current capabilities that they will have revolutionary effect.

There will be irrational and illogical responses. Significant changes will occur from acts that are so unique and critical as to be pivotal.

These conditions and circumstances are stated in very general terms. Assassinations, changes in the earth's surface, the development of antimatter energy, and the rise of a local leader who can unify and control most of Africa ... all are possible in the next 15 years. All are either improbable or unlikely without radical revolutionary effect ... all would affect US security.
Flashback

One hundred years ago, the United States reveled in the previous year’s easy victory over Spain in a mere 113 days. For the next 17 years, the War Department devoted a large portion of its limited resources to managing new responsibilities in the Philippines, Cuba, and Puerto Rico. Mexico received top billing in the 1916 Report of the Secretary of War with “Black Jack” Pershing’s pursuit of Francisco “Pancho” Villa into Mexico while the war in Europe received only short mention. In less than a year after this report was handed to the President, the United States had declared war on Imperial Germany. Secretary of War Baker lamented in his November 1917 report, “The peaceful ambitions of our people had long postponed our entrance in the conflict; and adherence to strict neutrality through long months of delicate situations delayed the beginning of active military preparation.” Many of the members of the Expeditionary Force, largely trained in doctrine and tactics based on the Civil War, faced the new horror of chemical warfare in the trenches while under the deadly shadow of the Spanish Influenza. Even after the “Great War,” it was still difficult to ponder our eventual permanence on the world stage and the threats and challenges we would face in the coming years.

“What experience and history teach is this—that nations and governments have never learned anything from history, or acted upon any lessons they might have drawn from it.”

— Georg W. F. Hegel
"There is nothing worse than a sharp image of a fuzzy concept."
Ansel Adams

There are no facts about the future

"Men's courses will foreshadow certain ends, to which, if persevered in, they must lead. But if the courses be departed from, the ends will change. Say it is thus with what you show me!"

— Charles Dickens
A Christmas Carol
"Politicians may ... pretend that the soldier is in no different position than any other professional. He is, he serves under an unlimited liability and it is the unlimited liability that lends dignity to the military profession ... there's also the fact that military action is group action, particularly in armies ... the success of armies depends to a very high degree on the coherence of the group, and the coherence of the group depends on the degree of trust and confidence of its members in each other."

— General Sir John Hackett

"It is simple enough to tell fortunes if a man dedicates himself to the idea that the future will inevitably be worse than the past and that time is a path leading nowhere but a place of deep and persistent threat."

— Charles Frazier, Cold Mountain
The unauthorized disclosure of classified information may be prosecuted under Section 793 and Section 798, Title 18, USC, and is punishable by fine of not more than $10,000, imprisonment of not more than 10 years, or both.