

129224

U.S. GENERAL ACCOUNTING OFFICE  
WASHINGTON, D.C.

FOR RELEASE ON DELIVERY  
Expected at 2:00 P.M.  
March 5, 1986

STATEMENT OF  
HENRY W. CONNOR  
SENIOR ASSOCIATE DIRECTOR  
NATIONAL SECURITY AND INTERNATIONAL AFFAIRS DIVISION

BEFORE THE  
SUBCOMMITTEE ON READINESS  
COMMITTEE ON ARMED SERVICES  
HOUSE OF REPRESENTATIVES

ON  
MEASURING MILITARY CAPABILITY--  
PROGRESS, PROBLEMS, AND FUTURE DIRECTION



129224

0344715 / 129224

Mr. Chairman and Members of the Subcommittee:

We appreciate the opportunity to appear before you today to discuss our views on Department of Defense (DOD) efforts to measure military capability. As you know, military capability is a broad term which DOD has divided into four subsets or pillars. These pillars are:

--Readiness: the ability of military forces, weapon systems or equipment to deliver the output for which they were designed.

--Sustainability: the staying power of military forces, weapon systems, and equipment.

--Modernization: the technical sophistication of forces, weapon systems, and equipment.

--Force structure: the numbers, size, and composition of units constituting the military forces.

In recent years, there has been much congressional interest in (1) determining what increases in military capability have resulted from previous defense budget increases and (2) identifying what future capability improvements can be expected from planned military expenditures. This interest has prompted

considerable DOD activity in trying to better define and measure military capability, including:

--In 1984, the Secretary of Defense created the Strategic Plans and Resource Analysis Agency within the Joint Chiefs of Staff (JCS). This agency was tasked with analyzing how DOD program and budget proposals impact U.S. war-fighting capability and identifying service resource requirements which might be combined. This activity is currently developing analytical tools which they believe will enable them to achieve these objectives.

--Also in 1984, the Secretary of Defense established a readiness task force chaired jointly by JCS and Office of the Secretary of Defense (OSD) representatives. The group was directed to try to develop models which relate the capability impacts of alternative resource inputs and logistics support measures. The task force initially focused on the Unit Status and Identity Reporting System and made recommendations for system improvements to the Secretary of Defense. As a result of an OSD realignment the task force became inactive before achieving its assigned objectives.

--In 1985, the Joint Chiefs of Staff Director of Operations was tasked with compiling data, such as increases in modernized equipment, from the services and formulating the

Military Status Report. This report is a compilation of various service-selected indicators of military capability summarized to show increases in military capability since 1981.

--Later in 1985, the Deputy Secretary of Defense initiated a new steering group under the OSD Director of Program Analysis and Evaluation. This group was also tasked with developing a set of measures of military capability. However, the group's first task was to review the JCS Military Status Report. Having submitted their analysis to the Secretary of Defense in early January 1986, the group is currently reviewing several capability assessment systems being developed by other DOD activities.

I would now like to briefly discuss some of the systems and models that DOD and the services are developing and, in some cases, using to attempt to measure aspects of military capability.

#### UNIT STATUS AND IDENTITY REPORTING SYSTEM

One indicator of the first pillar of military capability--readiness--is the Unit Status and Identity Reporting System referred to as UNITREP. It is a DOD-wide system which reports the inventory status and condition of both people and equipment at the unit level. However, as stated in the DOD

Force Readiness Report submitted to Congress in February 1985, the complex interaction between the various readiness components and the difficulty of quantifying the relative importance of each has precluded finding a suitable quantitative measure of overall force readiness.

Moreover, UNITREP is implemented differently by each of the services and, therefore, cannot be used for accurate interservice comparisons. For example, implementing instructions provide that all services, in determining aircrew readiness, should measure against their wartime crew level requirements. The Navy, however, has decided to measure against peacetime authorized levels. The Navy believes units should not have to lower readiness reporting levels in both the training and personnel resource ratings if for budgetary reasons aircrews cannot be provided at the wartime levels.

Even intraservice comparisons of UNITREP data may be misleading. For example, all services but the Navy allow a commander to subjectively raise or lower the unit's overall readiness if the commander believes the revised rating is a more accurate reflection of the unit's true readiness. Service officials told us that commanders, in making their subjective changes, may be mistaken or overly optimistic in their judgments, because of concern that the ratings reflect their individual performance. On the other hand, commanders might be pessimistic because of a desire to highlight perceived problem

areas and hopefully obtain additional resources. One way to minimize the affects of subjective changes would be to prepare two ratings, one which includes the commander's subjective assessment and one which does not.

Additional UNITREP implementation differences which affect comparisons and some additional suggestions for improving UNITREP data are provided in our report Measuring Military Capability--Progress, Problems, and Future Direction (GAO/NSIAD-86-72) which was issued to Chairman Aspin on February 24, 1986.

#### READINESS AND SUSTAINABILITY

The second pillar, sustainability, is often linked with readiness when attempts are made to measure the impact of logistics resources on overall military capability. Various DOD activities have initiated approaches which try to relate logistics resource inputs to mission objectives. These approaches often involve developing analytical models which are designed to evaluate the impact of the availability of various logistics resources on the military forces' ability to perform required combat operations.

Many of the analytical systems developed thus far focus on the relationship of spare parts to weapon systems availability. For example, given a certain level of spare parts, how many sorties can be flown? More recent efforts have focused on how

the availability of other resources such as petroleum, oil, lubricants, maintenance, manpower, and munitions affect readiness and sustainability. Military managers are attempting to answer the question of how defense dollars should be allocated among the various logistics resource areas in order to obtain a desired level of readiness and sustainability. That is, what mix of resources can produce the greatest amount of war-fighting capability, given some finite level of funding and what planned military operations or exercises can be achieved given existing and planned investments in various resources?

Providing answers to these questions has proven to be a difficult and complex task. The Congress has directed that DOD develop "quantifiable and measurable readiness requirements" and project the effects of appropriations requested on materiel readiness. While DOD has devoted considerable activity to this objective, it has not yet been able to fully develop the capability to make such assessments.

#### MODERNIZATION AND FORCE STRUCTURE

The third and fourth pillars of military capability--modernization and force structure--are subjects which have been dealt with by various elements of OSD, JCS, and the military services which are charged with estimating and assessing U.S. and foreign military capability and with identifying future U.S. military requirements. Traditionally, the tools used for

these assessments were tabulations of the types and quantities of weapons possessed by U.S. forces and, in some cases, comparisons were made with intelligence estimates of the comparable equipment held by other national forces.

Since the mid-1960's, an assortment of DOD and intelligence agencies have tried to find more complete measures than tabulating forces and equipment. However, there currently is no real consensus as to what constitutes an acceptable measure. Thus, various military organizations develop assessment tools for their own use. Our February 1986 report describes several existing and developmental systems designed for this purpose within each of the services, the JCS and the OSD. The multiplicity of systems suggests that evaluating the impact of force structure and modernization changes on overall military capability is also a most difficult task.

#### VALIDATION

While there has been much activity throughout DOD to develop improved analytical tools for evaluating military capability, the credibility of these models has been the subject of much discussion. One of the major problems deals with assumptions which are made in developing the models. Despite the correctness of what is modeled, inaccurate or incomplete assumptions can invalidate the effectiveness of the modeling output.



Some military analysts we interviewed cited cases showing that very different results are produced depending on assumptions. While model validation, if properly accomplished, will generally identify erroneous model assumptions, OSD officials told us that the various weapons-scoring systems currently being used within DOD have not been adequately validated. DOD and contractor officials told us that a primary reason for inadequate model validation is that necessary data is often unavailable or is of questionable validity.

In addition, we have found that the so-called intangible human factors, such as leadership, morale, and skill levels, are generally not treated in existing capability assessment models. However, in the case of air-to-air and ground combat, extensive empirical test data indicate that human interactions are statistically more important than aircraft or combat vehicle performance, avionics, weaponry, or other test variables included in combat models.

## CONCLUSIONS

In conclusion, it is clear that at the present time, measuring capability in any one of the pillars, much less the overall capability of U.S. forces is a very complex task due to the number of tangible and intangible variables. While several models which attempt to measure various aspects of war-fighting

capability are being developed, the multiplicity of models and approaches suggests there is no general consensus regarding what constitutes an acceptable measure. The current state of military capability forecasting is such that only inferences can be drawn from the variety of systems and models being used to forecast aspects of military capability.

For the past several years a variety of DOD activities have continued working on developing reporting systems and/or models which can evaluate the state of readiness, sustainability, modernization and force structure. During this time, there has been no consistent focal point for coordinating the numerous activities in this area. It may be useful for DOD to identify such a focal point for coordinating future activities in the capability assessment area, as well as for interacting with the Congress.

-- -- --

Mr. Chairman, that concludes my prepared statement. We would be happy to respond to any questions.

33687