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# ANNEX TO NATIONAL INTELLIGENCE ESTIMATE

APPROVED FOR RELEASE  
DATE: MAY 2004

NO. 100-2-58

## DEVELOPMENT OF NUCLEAR CAPABILITIES BY FOURTH COUNTRIES: LIKELIHOOD AND CONSEQUENCES

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*Submitted by the*

#### DIRECTOR OF CENTRAL INTELLIGENCE

*The following intelligence organizations participated in the preparation of this Annex: The Central Intelligence Agency and the intelligence organizations of the Departments of State, the Army, the Navy, the Air Force, The Joint Staff, and the Atomic Energy Commission.*

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*on 1 July 1958. Concurring were The Director of Intelligence and Research, Department of State; the Assistant Chief of Staff, Intelligence, Department of the Army; the Director of Naval Intelligence; the Assistant Chief of Staff, Intelligence, USAF; the Deputy Director for Intelligence, The Joint Staff; and the Atomic Energy Commission Representative to the IAC. The Assistant Director, Federal Bureau of Investigation, abstained, the subject being outside of his jurisdiction.*

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NIE 100-2-58: DEVELOPMENT OF NUCLEAR CAPABILITIES BY FOURTH COUNTRIES:  
 LIKELIHOOD AND CONSEQUENCES



## ANNEX

WEAPONS DEVELOPMENT CAPABILITIES OF SELECTED FOURTH COUNTRIES  
 AND GROUPINGS

*France*

1. We believe (although we have no reliable evidence to demonstrate) that France has probably conducted a fairly significant amount of theoretical weapons research during the past few years, and that France has probably monitored US and USSR weapons tests and has made some radiochemical analysis of resulting debris. In fissionable materials, we have estimated in the main body of this paper (paragraph 16) that it would take five years for the French to develop an independent capacity to produce substantial U-235; accordingly, for the next five years any independent French weapons program must rely on plutonium equivalent.

2. Our estimate, stated below, is based on these assumptions, and on the further assumption that the French will conduct a progressive test program under a very high priority with the objective of achieving light weight, reasonably efficient devices that are adaptable to various weapons systems, and with the further objective of obtaining megaton yield weapons at the earliest possible date. Our estimate is necessarily speculative and is not intended to reflect an actual representation of the likely French test and development program, but solely to indicate the direction and rate of progress of which the French would be capable on the assumptions stated. We estimate that:

a. One year after the date of the first French nuclear test (now believed to be scheduled for late 1958 or early 1959), France could have available several of these weapons of nominal yield (20-40 KT) suitable for delivery from light bomber aircraft.

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*France, Italy and West Germany*

3. The cooperative efforts of the FIG nations would probably result in a program not unlike that achieved by France alone. However, the combined efforts might accelerate future developments as much as one year, and would permit the fabrication of greater numbers of weapons than could be achieved by France alone. The economic burden on France would be greatly reduced by such a joint effort.

*EURATOM GROUPING*

4. The results of a cooperative effort of the EURATOM nations in a weapons program would probably be approximately the same as that achieved by the FIG nations. The addition of Belgium, Luxembourg and the Netherlands would further ease the economic burden of a weapons development program.

*Sweden*

5. It is not expected that Sweden will have fissionable material available for a weapons development program before 1961 or 1962. Should Sweden now decide to pursue a weapons development program it would be possible for her to carry out sufficient research work in the next 4 to 5 years to enable her to follow a weapons development program similar to that outlined for France. Thus, the achievements indicated for France in 1959 could be attained by Sweden in 1963. Following this timetable of development, Sweden would not have light weight, small diameter weapons until the end of the period of this estimate.

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