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## **NUCLEAR NON-ENTRIES: SWEDEN**

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Thank you for your kind invitation to attend this event. I have been asked to talk about Sweden's nuclear weapons programme and especially elaborate on why it may have abandoned its nuclear plans in the mid-1960s.

As you all know, Sweden remained neutral during the Second World War. The country's policy not to engage in armed warfare—and to stay out of any formal alliances—dates back to 1812. However, events throughout the 1930s shook the neutrality to the core. The Swedish Social Democratic Party, which gained control of the cabinet in 1936, and would remain in power until 1976, had to formulate a response.

It decided to institute a policy known as ‘armed neutrality’. This change of direction had an immediate impact, and the country’s defence spending increased tenfold over a period of less than a decade. The emphasis on defence continued after 1945. By 1957, the Swedish Air Force was the fourth largest in the world, with more than 1,000 front-line aircraft. You can only understand Sweden's quest for a nuclear weapon against that backdrop. A strong military controlled by a neutral government facing a consistent threat from the Soviet Union. As the country’s industrial infrastructure was intact, it was in a perfect position to acquire the ultimate deterrent.

This started in 1947 when the government set up a public-private joint venture known as the Atomic Energy Company to establish uranium and plutonium production. The AEC signed a cooperation agreement with the Defence Research Institute, tasked to develop military applications of nuclear energy as early as 1948. One of the main forces behind the programme was, indeed, the Swedish Air Force.

Things developed rapidly after that. The first research reactor came online in 1954, constructed deep underground beneath the Royal Technical College. This reactor was designed to give Sweden's scientists a better understanding of what it takes to run a reactor, but also insight into material properties. This was no secret—the construction of the reactor was publicly announced, it featured on postcards, and the King even attended the inauguration. Sweden maintained the public stance that its nuclear quest was entirely peaceful and defended its right to nuclear energy as vigorously as the Iranians defend it today.

Construction of a much bigger started in 1957. This unit—the R3 “Adam”—could have produced enough material for a small weapons effort, but since the United States supplied the heavy water, it remained safeguarded. Plans a plutonium producer—the R4 “Eva”—located on the Swedish west coast, was far progressed in the late 1950s. The site for the reprocessing plant had been chosen, and land acquired.

The design of the weapon system itself had been more or less completed by the end of the 1950s. It was supposed to be a lightweight system for its time, based on quite advanced design principles. The Swedish



Aircraft Company—better known as SAAB—had already developed a supersonic bomber, known as the A36, as a delivery vehicle. The air force foresaw a tactical use for the bomb. Swedish aviators would take off and race over the Baltic Sea, then lob the bomb at Soviet embarkation ports.

However, the ground under the weapons effort had started to shift by the end of the 1950s. While the conservative and liberal parties supported it, a schism had begun to develop within the ruling Social Democratic party, led by Prime Minister Tage Erlander. While the Social Democratic women's movement had made its position clear by 1956, the mainstream debate did not start until 1957. The Supreme Commander, General Nils Swedlund, asked for a budget for an overt weapons programme (called 'Programme L'). This led to a considerable debate in the Swedish press. It was clear that very senior figures within the Social Democratic movement were not supportive of the idea, although it is relatively established the Prime Minister was.

Mr Erlander obviously had to act. Rather than risking a split within his party, he responded by setting up a working group on the nuclear weapons issue. The secretary of this group was a young and brilliant lawyer by the name of Olof Palme. The report itself is a policy masterpiece. The question of overt weapons acquisition was postponed, but the military was given considerable leeway in conducting so-called 'extended defensive research'. To defend against the effects of the bomb, one had to understand how it works, the report argued. So, paradoxically, the weapons programme accelerated after 1959. As late as 1963, the Swedish government noted that the Limited Test Ban Treaty did not restrict the option to produce nuclear weapons.

In 1966, State Secretary Karl Frithiofson gave a speech, which more or less dismissed the future production of nuclear weapons. This was in line with the Supreme Commander's Annual Report of 1965, which emphasised conventional defence capabilities. The nuclear plans were shelved. The R3 reactor continued to operate until 1974 when it was shut down permanently. The R4—while finished in 1968—was never deemed commercially viable, and was eventually converted into an oil-powered plant. It is important to note that Sweden, by that time, had developed a fully functional weapons design, which her scientists were confident would work without testing.

Over the years, the extended defence research programme shut down. Some activities continued into the early 1970s, after which it stopped altogether. The history of the programme was erased from public memory and has only recently started to re-emerge.

Why did not Sweden take the final step? This is still somewhat of a mystery, and records from the time are not likely to be released for another 20 years. Some believe that Sweden came to an undisclosed arrangement with the United States—effectively bringing the country under the nuclear umbrella. Some point to shifting public opinion: in 1957, 36% of the Swedish people opposed nuclear weapons, but this had risen to 69% by 1965. Others believe that the military was confronted with a stark economic choice. Sweden could either invest in conventional defence—principally by ordering the SAAB JA37 fighter-bomber—or put its money into weapons of mass destruction. It chose the former.

Historians will set the record straight as documents become unclassified. Until then, we will have to contend with speculation.

I thank you for your kind attention.