

Poland's Defense Modernization in the Wake of Ukraine War and Its Recent Massive Tank, Artillery and Jet Deal with The Republic of Korea

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Introduction

Poland and the Republic of Korea established diplomatic relation on November 1, 1989. Poland was the second country in the Soviet bloc to establish diplomatic relations with the Republic of Korea. In the early 2010's, a deepening of the strategic military partnership between Poland and the Republic of Korea started. Meanwhile Poland wanted to sell military devices to the Republic of Korea (Mencel 2016: 118). More recently, Polish decided recently to strengthen its cooperation with the Republic of Korea by signing an agreement related to the supply and maintenance of military technology. South Korea is also the first Asian investor in Poland and The Republic of Korea is an important market for food products which come from Poland (Nacewska-Twardowska 2016: 454).

The Republic of Korea It is also becoming an increasingly important supplier of military equipment for the Alliance countries, where in 2017-2021 approximately 24% of the Republic of Korean arms exports went (14% to the United Kingdom, Norway - 6%, Poland - 3%, Turkey and Estonia - less than 1%). In the face of Russia's invasion of Ukraine, the interest of NATO countries in the Republic of Korea's arms proposal, which is compatible with NATO standards and is open to industrial cooperation, has increased.

1. The Context of the Modernization of the army of Poland.

The invasion of Ukraine by the Russian army which started on the 24 February was a turning point form the Polish ministry of Defense which immediately decided to increase the military capacities of Poland. Poland was already involved in military projects with Great Britain and the USA especially related to air defense. In 2018, Poland purchased the American Patriot surface-to-air missile system, which will become operational in 2023 (Mackiewicz, 2021: 141). These new decisions were made based on two important reasons. First, there is an open war beyond the eastern border of Poland. Secondly, Russia is an unpredictable state when it comes to government decisions. Polish authorities must prepare the country to all kind of situations. That is why Poland must adapt its defense industry and provide an efficient service and maintenance center in a case of military operations or a potential war.

In the past Polish military orders were signed with partners from the United States and Great Britain. However, these projects were too limited due to financial limitations. Recently, under the framework of the law on the defense of the Fatherland and the Armed Forces Support Fund (which were signed in the context of the invasion of Ukraine by Russian forces), the budget possibilities became much greater. A military cooperation with the Republic of

Korea is also justified by the fact that some of the American military devices are compatible with the South Korean one (Fryśka-Son 2019: 27).

2. The Impact of the Transaction on the Polish Military Capabilities

On July 27, Mariusz Błaszczak, Deputy Prime Minister and Minister of National Defense, approved armaments contracts concluded with the Republic of Korea for the purchase of equipment for the Polish Army worth USD 15 bn. Weapon contracts with the Republic of Korea (K2 tanks, K9 howitzers, FA-50 planes) is one of the most important and largest Polish defense orders in recent years. The ordered equipment is a real strengthening of the Polish deterrence and defense potential (*Szef MON zatwierdził umowy na uzbrojenie z Korei Południowej*: 2022)

Ultimately, military devices included in this agreement will be manufactured with a wide participation of the Polish defense industry (Polska Grupa Zbrojeniowa S.A. and WB GROUP). Orders are characterized by a fast pace of deliveries and a large transfer of technology to Poland. It is worth to be noted that the Republic of Korea tried in the past to sell some military equipment to Poland, however ten years ago, Polish military organizations did not consider seriously the proposal made by South Korean authorities (*Współpraca wojskowa z Koreą. Poncyliusz: kraj dla nas korzystny, z jednego powodu*: 2022).

The Polish side of the transaction is the Armaments Agency, representing the State Treasury, while the Korean side has three entities, i.e. Hyundai Rotem - responsible for the supply of K2 tanks, Hanwha Defense - responsible for the supply of K9 family self-propelled howitzers and Korean Aerospace Industries - responsible for the deliveries FA-50 family aircraft.

The adopted method of contracting contracts is related to the implementation of three sub-projects divided into stages, which is also related to the wide scope of technology transfer and the establishment of industrial potential in the territory of the Republic of Poland. It will also make it possible to optimize the procurement of military equipment being the subject of framework agreements, and will enable the rapid achievement, already in the first stage, of the operational capabilities required by the Polish Armed Forces by supplying it with modern military equipment.

Regarding K2 tanks, the order is divided into two stages. In the first stage, 180 tanks will be acquired, which deliveries will start in 2022 and end in 2025. The second stage is related to 800 tanks according to K2PL standard (Polonized K2 tanks). In 2026, the production of K2PL tanks will start in Poland. From 2026, it is also planned to standardize the configuration of the first 180 K2 tanks to the K2PL standard. In the longer term, it is planned to develop a new generation tank as part of Polish-South Korean cooperation. The armor of the K2 tank already in the standard configuration, which can be additionally supplemented by active protection systems ensures high ballistic and anti-mining resistance. The tanks acquired in the first stage will also be polonized and brought to the K2PL standard. The K2PL Wilk design is

to be based directly on the Republic of Korean K2 Black Panther. The design changes would fit the requirements defined by the Polish Ministry of Defense, while on the other they would be polonized, through the utilization of Polish observation systems. The first stage includes training package ie. simulator equipment and personnel training in the Republic of Korea and Poland, including training on K2 tanks in cooperation with the Army of the Republic of Korea. The South Korean authorities are supposed to provide some maintenance support in Poland as soon as first tanks arrived in Poland. However, all issues will be solved on the production unit of Huta Stalowa Wola, which is a branch of the Polish Armaments. The production capacities of this facility are too limited (20 tanks on a yearly basis) and shall be doubled or associated with another facility. The schedule will be difficult to be maintained. Therefore, the realization of the entire project may be jeopardized.

Concerning K9 howitzers, in the first stage, Polish authorities plan to acquire 48 howitzers, some of which will be delivered to Poland this year (filling the gap after handing over the Polish equipment to Ukraine). Deliveries of another 600 howitzers will start in 2024, and from 2026 they will be manufactured in Poland under the name of K9PL. From the very beginning, K9 howitzers will be equipped with Polish communication systems and will be plugged into the integrated Topaz combat management system.

The agreement also provides for a technology transfer. This will allow for the acquisition of service competences in the first stage and the target launch of the production of K9PL howitzers in Poland, and thus the polonization of spare parts supply chains. Deliveries of this version are expected to start in 2024 and will be manufactured in the Republic of Korea. From 2026, the production of K9PL will start in a new factory. The delivery dates of the first 48 K9A1 howitzers is planned for 2022-2023, while the deliveries of 624 K9PL howitzers will start in 2024. The production of howitzers in Poland is planned for 2026. It is also planned to standardize the configuration of the first 48 K9A1 howitzers to the standard K9PL. In the longer term, it is planned to develop a new generation self-propelled howitzer in Polish-South Korean cooperation.

Finally Polish authorities plan also to buy 48 FA-50 aircrafts from the Korean Aerospace Industries. The FA-50 Fighting Eagle is a South Korean light two-person combat aircraft equipped with advanced imaging and control systems, as well as modern avionics and fire control radar. FA-50 aircrafts are light, multi-purpose training and combat machines. The first 12 aircraft will be delivered to Poland in mid-2023 while the deliveries of 36 FA-50PLs will start in 2025 and will be carried out within 2-3 years. These aircrafts will be polonized through their development version FA-50PL along with a training and logistics package, ammunition reserves and technical support of the manufacturer. The training package includes simulator equipment and pilot training, first in South Korea, and then in Poland. The contract also provides for a technology transfer, as a result of which the FA-50PL aircraft service center will

be built in Poland, with a planned launch date in 2026. From a different perspective, according to Pawel Poncyljusz, a member of the Commission of the National Defense, the previously mentioned transaction may also have some negative aspects. This member of the Polish National Assembly of the Republic of Poland considers that the acquisition of FA-50 was not compulsory. These airplanes are too small for the Polish army. Italian aircrafts M346 shall be rather acquired for the Deblin Military Air Base (*Współpraca wojskowa z Koreą. Poncyljusz: kraj dla nas korzystny, z jednego powodu: 2022*).

Findings and prospects

The agreement discussed in this research paper concluded that Poland would obtain around 1,000 tanks, 648 cannon howitzers and 48 aircraft. It shows that the Republic of Korea equipment can contribute to the modernization of the armed forces, which is necessary as a response to Russia's revisionist policy. The technology transfer provided in the agreements is also intended to strengthen the potential of the Polish defense industry. However, further development of cooperation with Poland and other Central European countries will require the Republic of Korea greater interest in the situation in Eastern Europe.

The Polish Ministry of Defense is also considering a cooperation with the Republic of Korea on projects other than tanks, self-propelled artillery and aircrafts which were mentioned in this paper. Polish authorities mentioned a deep interest in tracked vehicles and rocket artillery. The Republic of Korea can also be an important defense ally for Poland. It goes, among others for support for the Polish defense industry. Some Polish-Korean partnerships emerged already in the past when the defense contractor of Stalowa Wola acquired a license for the K9 chassis for the self-propelled howitzers Krab in December 2014.

From a more global perspective, plans related to Korean-Polish cooperation in the field of defense industry may be mutually beneficial (Jezioro 2021: 153), as they allow Polish industry to acquire new competences and production capacities. The situation of the Polish military navy is also widely discussed by military experts. All of them agree on the fact that the Polish navy is in a bad condition (Pac 2022: 132; Jura 2021: 86). This may become another area of cooperation with the Republic of Korea. At the same time, Poland is becoming a foothold for the Korean offer, for Europe, shortening supply chains and facilitating servicing. Currently, the Korean K2 tank is offered to the Norwegian army as an alternative to the German Leopard. If more countries decide to buy Korean equipment, Poland may become a regional industrial and service hub for the entire European region.

In my opinion, the Republic of Korea is a beneficial country for Poland. If there would be a war involving Poland, the Republic of Korean technology would be available to Poland. It is worth to mention that in the first days of the Russian invasion over Ukraine, the Russians bombed armaments plants. Ukraine already does not have a backup country where it could

produce rockets, and today, if Kiev does not get Western rockets, it does not have any. That is why the Republic of Korean technology which is available to Poland can be considered as a crucial asset of the Polish army. On the other side, the acquisition of K9 howitzers is not fully justified as their technology is similar to a large extent to the technology of the Polish krabs. That is in a close future, the Polish Ministry of Defense may complete its orders by some technologies which are complementary to the ones which were acquired from South Korean partners.

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