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DOUBLE EDGED ALLIANCE: TURKISH S-400 TRIUMF SYSTEMS AND THE F-35 LIGHTNING II

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List of Abbreviations:

CAATSA	Countering America’s Adversaries Through Sanctions Act
EU	European Union
FD	<i>English:</i> Missile Shield <i>Chinese:</i> Fang Dun.
HQ	<i>English:</i> Red Banner <i>Chinese:</i> Hong Qi
IAMD	Integrated Air and Missile Defense
NDAA	National Defense Authorization Act
NATO	North Atlantic Treaty Organization
PKK	<i>English:</i> Kurdistan Workers’ Party <i>Kurdish:</i> Partiya Karkeren Kurdistane
SAMP/T	Surface-to-Air Missile Platform/Terrain
T-LORAMIDS	Turkish Long-Range Air and Missile Defense Systems
TAI	Turkish Aerospace Industries
UAV	Unmanned Aerial Vehicle
USA	United States of America
USD	United States Dollars
USSR	Union of Soviet Socialist Republics
YPG	<i>English:</i> People’s Protection Units <i>Kurdish:</i> Yekineyen Parastina Gel

Current Situation

The once sturdy alliance between North Atlantic Treaty Organization (NATO) allies, Turkey and the United States of America (USA), is now fraught with dramatic troubles. Over the past few years, the relationship between the USA and Turkey has witnessed one strain after another, leading to its current state. While some in Congress favor the removal of Turkey from NATO as a result of past and present disagreements, we must not dismiss the geopolitical importance of Turkey as an ally. The fact is that this long-standing ally contains critically important USA military bases and possesses the second largest military in the alliance¹, and this is coupled with the fact that Turkey proved to be a valuable partner when countering the Union of Soviet Socialist Republics (USSR) during the Cold War. A closer look at the issues provides a better understanding of the precarious USA-Turkey relationship.

The increasing tensions between the USA and Turkey can be attributed to factors including:

- (a) The USA providing military support to the People's Protection Units (YPG) in northern Syria, a group that Turkey believes has strong links to the Kurdistan Workers' Party (PKK), which is recognized as a terrorist organization by both Turkey and the United States;
- (b) Turkish Prime Minister Recep Tayyip Erdogan's bodyguards assaulting protesters outside of the Turkish embassy in Washington D.C.;
- (c) The United States' refusal to extradite Fethullah Gulen, a figure Turkey accuses of orchestrating the July 2016 coup d'état attempt in Turkey;
- (d) Turkey's arrest and imprisonment of Andrew Brunson, an American pastor accused of terrorism;
- (e) Recent steel tariffs placed on Turkey by the USA, which resulted in a further drop in the Turkish economy;
- (f) The Turkish purchase of the Russian-made S-400 Triumf missile system; and
- (g) Efforts made by the USA to block the transfer the F-35 Lightning II to Turkey.

¹ Mortimer, C. (2017). "NATO's second biggest army just bought nearly £2bn of weapons from Russia" from *Independent*. Available online: <https://www.independent.co.uk/news/world/europe/nato-army-buys-2-billion-dollars-weapons-from-russia-military-deal-a7942521.html> (Last Retrieved: September 10, 2018).

The S-400 Triumf Long-Range Anti-Aircraft Missile System

The S-400 Triumf is a Russian-made advanced long-range anti-aircraft missile system with the capacity to carry three missile types capable of destroying aircraft, unmanned aerial vehicles (UAVs), as well as both ballistic and cruise missiles. The system includes a multi-function radar, autonomous detection and targeting systems, missile launchers, and a command and control center. The S-400 can engage up to 36 targets simultaneously within a range of 400 kilometers and at an altitude of up to 30 kilometers. This mobile system can be deployed within just five minutes². Most importantly, this system was designed to target even the most advanced stealth-enabled fighter jets, which includes the F-35 Lightning II. Additionally, this system is capable of engaging ground troops, if needed³. Turkey is expected to receive the S-400 air defense missile system from Russia in 2019⁴.

The F-35 Lightning II Joint Strike Fighter

The F-35 Lightning II is a 5th-generation fighter jet, which means that this jet combines advanced stealth capabilities with speed, agility, integrated avionics, sensor fusion, and network-enabled operations⁵. This aircraft's mission capabilities include air-to-air combat, air-to-ground strikes, electronic attack, intelligence, surveillance and reconnaissance. 5th-generation fighter jets are currently the most advanced combat aircraft in the world. This next-generation fighter jet was



² <https://www.army-technology.com/projects/s-400-triumph-air-defence-missile-system/> (Last Retrieved: September 10, 2018).

³ Bryen, S. (2018). "Russia's S-400 is way more dangerous than you think" from *The National Interest*. Available online: <https://nationalinterest.org/blog/the-buzz/russias-s-400-way-more-dangerous-you-think-24116> (Last Retrieved: September 10, 2018).

⁴ <http://www.hurriyetdailynews.com/turkey-to-receive-russian-s-400-missiles-in-2019-136026> (Last Retrieved: September 10, 2018).

⁵ <https://www.f35.com/about> (Last Retrieved: September 10, 2018).

designed to evade the world's top-tier missile defense systems, such as Russia's S-400⁶, using advanced stealth technology. Most importantly, the F-35 Lightning II is produced by a consortium of nine member states – the USA, United Kingdom, Italy, the Netherlands, Turkey, Canada, Australia, Denmark, and Norway – with each member existing simultaneously as contributors and shareholders; the USA funds majority of the program⁷. More than just a contributor to the F-35 Joint Strike Fighter program, Turkey had planned to purchase 100 of the F-35 Lightning II jets. This order for 100 jets is the second highest of all the interested parties (excluding the USA), right behind the United Kingdom's order for 138 jets⁸. Turkey is expected to spend \$16 billion United States dollars (USD) to purchase the 100 aircraft in addition to spending over \$175 million USD on the Joint Strike Fighter program since joining the program in 2002⁹.

Why is Turkey Purchasing S-400s from Russia?

Given that Turkey is a NATO member, the purchase of an air defense missile system from Russia, the conventional adversary of NATO, is indeed alarming. However, a coup d'état attempt in July 2016, in addition to heightened tensions from neighboring countries, makes Turkey's concern for defense improvements entirely understandable. The Turkish government largely justifies their interest in bolstering military capabilities by citing the numerous complex conflicts and political concerns among its neighboring countries, which includes Syria, Iran, and Iraq.

In December 2017, Turkey signed an agreement with Russia to purchase the S-400 air defense missile system¹⁰. Despite complaints from the USA and other NATO allies, Turkish Foreign Minister, Mevlut Cavusoglu, argued that the deal has been completed and alterations are not possible¹¹. Many experts believe that Turkey's purchase of a Russian-made air and missile defense

⁶ Brennan, D. (2018). "What is the S-400? The Russian Anti-Aircraft weapon dividing NATO" from *Newsweek*. Available online: <https://www.newsweek.com/what-s400-russian-anti-aircraft-weapon-nato-840046> (Last Retrieved: September 10, 2018).

⁷ <https://www.f35.com/global> (Last Retrieved: September 10, 2018).

⁸ Gertler, J. (2018). "F-35 Joint Strike Fighter (JSF) Program" from *Congressional Research Service*. Available online: <https://fas.org/sgp/crs/weapons/RL30563.pdf> (Last Retrieved: September 10, 2018).

⁹ Ozbek, T. (2014). "Turkey confirms F-35 procurement plans" from *Flight Global*. Available online: <https://www.flightglobal.com/news/articles/turkey-confirms-f-35-procurement-plans-398983/> (Last Retrieved: September 10, 2018).

¹⁰ Akcay, A. S. & Aytac, S. A. (2017). "Turkey, Russia sign S-400 missile defense system deal" from *Anadolu Agency*. Available online: <https://www.aa.com.tr/en/economy/turkey-russia-sign-s-400-missile-defense-system-deal/1018363> (Last Retrieved: September 10, 2018).

¹¹ <https://www.reuters.com/article/us-nato-foreign-usa-turkey/pompeo-presses-turkey-on-s-400-missiles-purchase-from-russia-idUSKBN1HY2A6> (Last Retrieved: September 10, 2018).

system is a symptom of the worsening USA-Turkey relations. Some theorize that Turkey's purchase of the S-400 is a response to detrimental actions from the USA and other NATO allies in the past. Prior to the purchase of S-400 air defense missile systems, Turkey had originally agreed on a deal to purchase a Chinese system in 2013¹². This deal to purchase a Chinese system was part of a bidding process launched by Turkey in 2007 known as the Turkish Long-Range Air and Missile Defense Systems (T-LORAMIDS) program, which allowed Turkey to select a company through which to purchase an air and missile defense system. Turkey had selected the Fang Dun-2000¹³ (FD-2000), which is the export variant missile of the Hong Qi-9¹⁴ (HQ-9). The FD-2000 is produced by the state-owned Chinese manufacturer, China Precision Machinery Import and Export Corporation, over proposals from Russian, American, French and Italian firms. Turkey cited cheaper costs, favorable technology transfer conditions, and early delivery, as the reasoning behind this decision¹⁵. This deal was canceled under pressure from the USA, which had placed sanctions on the Chinese manufacturer for selling weapons to Iran, Syria, and North Korea¹⁶. It is worth noting that European-produced Aster 30 surface-to-air missile platform/terrain (SAMP/T) and American-produced MIM-104F PAC-3 Patriot missile manufacturers participated in this bidding process as well, but were not selected. Turkey's pursuit of an air defense missile system was escalated again in 2015 when the USA, Germany, and the Netherlands withdrew their Patriot missile defense systems from southern Turkey¹⁷. Germany however, claims that this withdrawal was part of a planned rotational scheme with other nations¹⁸. Furthermore, Turkey argues that the S-400 is more advanced than the USA MIM-104 Patriot Missile Defense System, which has more limitation of range and carries only one type of missile as compared to the S-400 unit being able to carry up to three¹⁹. Lastly, Turkey views

¹² Trevithick, J. (2018). "US trying to sell Turkey Patriot missiles to end spat over Russian S-400 purchase" from *The Warzone*. Available online: <http://www.thedrive.com/the-war-zone/22204/u-s-trying-to-sell-turkey-patriot-missiles-to-end-spat-over-russian-s-400-purchase> (Last Retrieved: September 10, 2018).

¹³ Chinese: "Defensive Shield".

¹⁴ Chinese: "Red Banner".

¹⁵ Kibaroglu, M. (2016). "Why Turkey chose, and then rejected, a Chinese Air-Defense Missile" from *Defense One*. Available online: <https://www.defenseone.com/ideas/2016/02/turkey-china-air-defense-missile/125648/> (Last Retrieved: September 10, 2018).

¹⁶ Karadeniz, T. (2015). "Turkey eyes deal with China on missile defense despite NATO concern" from *Reuters*. Available online: <https://www.reuters.com/article/us-turkey-china-defence-idUSKBN0LN0W220150219> (Last Retrieved: September 10, 2018).

¹⁷ Koseoglu, S. (2017). "S-400: Turkey's mission to boost its air and missile defense" from *Al Jazeera*. Available online: <https://www.aljazeera.com/blogs/middleeast/2017/06/400-turkey-mission-boost-air-missile-defence-170613161920586.html> (Last Retrieved: September 10, 2018).

¹⁸ Sprenger, S. (2018). "Turkey defiant on purchase of Russian S-400 anti-missile weapon" from *Defense News*. Available online: <https://www.defensenews.com/smr/nato-priorities/2018/07/11/turkey-defiant-on-purchase-of-russian-s-400-anti-missile-weapon/> (Last Retrieved: September 10, 2018).

¹⁹ Brennan, D. (2018). "What is the S-400? The Russian Anti-Aircraft weapon dividing NATO" from *Newsweek*. Available online: <https://www.newsweek.com/what-s400-russian-anti-aircraft-weapon-nato-840046> (Last Retrieved: September 10, 2018).

their purchase of the S-400 system as a temporary solution until they are capable of producing their own indigenous air defense missile system²⁰.



Why is NATO Upset with the Purchases?

Understandably angered by Turkey's purchase of a Russian-made air defense missile system, NATO countries have listed a number of concerns regarding the purchase. The most prominent concern, repeatedly voiced by NATO allies, is that the S-400 system will not be interoperable with other NATO equipment²¹. Given that NATO operations involve several militaries working together in coordination, interoperability is decisively important. The S-400 system would not be able to link with the NATO Integrated Air and Missile Defense (IAMD), which is implemented through a network of interconnected national and NATO systems comprised of sensors, command and control facilities and weapons systems²². There are also concerns that the S-400 system will not be subject to the same deployment restrictions as NATO defense systems²³, meaning that they could theoretically be placed near the border with Armenia, which shares a tense history with Turkey, or

²⁰ Woody, C. (2017). "Turkey has agreed to buy Russia's advanced missile-defense system, leaving NATO wondering what's next" from *Business Insider*. Available online: <https://www.businessinsider.com/turkey-agreed-to-buy-russias-s-400-missile-system-concerns-about-nato-2017-7> (Last Retrieved: September 10, 2018).

²¹ Woody, C. (2017). "Turkish state media boasts about its Russian-made missile system's ability to shoot down US planes" in *Business Insider*. Available online: <https://www.businessinsider.com/turkey-anadolu-tweets-about-s-400-missiles-shooting-down-us-planes-2017-9> (Last Retrieved: September 10, 2018).

²² https://www.nato.int/cps/en/natolive/topics_8206.htm (Last Retrieved: September 10, 2018).

²³ Woody, C. (2017). "Turkish state media boasts about its Russian-made missile system's ability to shoot down US planes" in *Business Insider*. Available online: <https://www.businessinsider.com/turkey-anadolu-tweets-about-s-400-missiles-shooting-down-us-planes-2017-9> (Last Retrieved: September 10, 2018).

along the Aegean coast, which would be an antagonizing move towards Greece, which is also member to NATO. Any placement of S-400 systems near Greece would undoubtedly spark further intra-alliance disputes. Prior to the purchase in December 2017, some members of Congress, such as Senate Foreign Relations Committee member Benjamin Cardin, have argued that purchasing the S-400 system is a violation of the Countering America's Adversaries Through Sanctions Act (CAATSA), which allows for sanctions against states purchasing Russian military equipment²⁴. In addition, NATO members fear that with increased cooperation between Russia and Turkey, Russia could gain access to NATO intelligence or exploit the USA-Turkey friction to undermine the NATO alliance. Arguably, Russia is already trying to stoke USA-Turkey friction with the sale of their S-400 system. Throughout the Syrian Civil War, the world has witnessed Turkey's steady shift away from the USA and toward more Russia-friendly opinions, which is advantageous for any faction looking to drive a wedge in NATO.

Turkey Defends S-400 Purchase

In response to USA-led NATO dissension, Turkish Foreign Minister, Mevlut Cavusoglu, argues that Turkey only purchased the S-400 system after NATO allies declined to sell Western defense systems²⁵. Furthermore, the Foreign Minister insisted that the purchase poses no threat to NATO and criticized European allies use of potential European Union (EU) accession as leverage against Turkey. Addressing fears that the purchase of a Russian-made system will give Russia access to NATO intelligence, Turkish Undersecretariat for Defense Industries stated that the air defense missile systems can be operated independently without external connection²⁶.

Turkish President Erdogan has repeatedly reiterated his country's need for the S-400 system, and has argued that Turkey has the right to protect their own security issues as needed²⁷.

²⁴ Sprenger, S. (2018). "Turkey defiant on purchase of Russian S-400 anti-missile weapon" from *Defense News*. Available online: <https://www.defensenews.com/smr/nato-priorities/2018/07/11/turkey-defiant-on-purchase-of-russian-s-400-anti-missile-weapon/> (Last Retrieved: September 10, 2018).

²⁵ Ibid.

²⁶ Akcay, A. S. & Aytac, S. A. (2017). "Turkey, Russia sign S-400 missile defense system deal" from *Anadolu Agency*. Available online: <https://www.aa.com.tr/en/economy/turkey-russia-sign-s-400-missile-defense-system-deal/1018363> (Last Retrieved: September 10, 2018).

²⁷ (No Author Indicated). (2018). "Erdogan: Turkey needs Russia's S-400 missile defense system" from *Al Jazeera*. Available online: <https://www.aljazeera.com/news/2018/08/erdogan-turkey-russia-400-missile-defence-system-180831103412006.html> (Last Retrieved: September 10, 2018).

Furthermore, other representatives from Turkey have pointed out that several other countries have already purchased Russian-made air defense missile systems, most notably Greece, a NATO ally that currently possesses the older S-300 system²⁸. However, it is worth noting that Greece received their S-300 air defense missile systems as part of a deal to prevent military conflict in the divided country of Cyprus. This occurred when Greece accepted the missiles instead of Cyprus in order to prevent a forewarned preemptive strike by Turkey that was intended to support ethnic Turks on the island²⁹. Yet Turkish officials are correct in their observation that numerous nations are also pursuing the S-400 air defense missile system. As recently as August 2018, India disclosed that they will also be considering the purchase of the S-400 system³⁰. This adds India to the growing list of USA allies interested in Russian defense technology, which was already inclusive of Saudi Arabia and Iraq³¹.

United States Congress Moves to Block F-35 Sales to Turkey

In retaliatory fashion, the United States Congress moved to block the sale of F-35 Lightning II jets to Turkey as a response to growing disagreements between the two nations. On April 26, 2018, senators James Lankford, Thom Tillis, and Jeanne Shaheen proposed a bill that would block the transfer of the F-35s to Turkey³². The senators also expressed their concerns that President Erdogan was heading down a “path of reckless governance and disregard for the rule of law”³³. The senators cited the continued imprisonment of American pastor Andrew Brunson, the purchase of the Russian-made S-400 system, and threats of military action against USA troops stationed in northern Syria, as the reasoning behind their proposed bill. In addition, Representative Cicilline

²⁸ <https://missilethreat.csis.org/defsys/s-300/> (Last Retrieved: September 10, 2018).

²⁹ Trevithick, J. (2017). “It’s Official, Turkey is getting Russia’s S-400 Air Defense System” from *The Warzone*. Available online: <http://www.thedrive.com/the-war-zone/12841/its-official-turkey-is-getting-russias-s-400-air-defense-system> (Last Retrieved: September 10, 2018).

³⁰ (No Author Indicated). (2018). “India may face sanctions if it buys Russia’s S-400 missiles: US” from *Al Jazeera*. Available online: <https://www.aljazeera.com/news/2018/08/india-face-sanctions-buys-russia-400-missiles-180830083608701.html> (Last Retrieved: September 10, 2018).

³¹ Trevithick, J. (2018). “US trying to sell Turkey Patriot missiles to end spat over Russian S-400 Purchase” from *The Warzone*. Available online: <http://www.thedrive.com/the-war-zone/22204/u-s-trying-to-sell-turkey-patriot-missiles-to-end-spat-over-russian-s-400-purchase> (Last Retrieved: September 10, 2018).

³² (No Author Indicated). (2018). “Three U.S. senators move to block F-35 transfers to Turkey” from *Reuters*. Available online: <https://www.reuters.com/article/us-usa-turkey-military/three-u-s-senators-move-to-block-f-35-transfers-to-turkey-idUSKBN1HX3NO> (Last Retrieved: September 10, 2018).

³³ *Ibid.*

proposed an amendment to the Fiscal Year 2019 National Defense Authorization Act (NDAA) that would prevent the sale of F-35s to Turkey until President Trump can certify that the Turkish government is in “full cooperation with the criminal investigation and prosecution of Turkish Government employees involved in the assault on civilians in Washington, D.C. on May 17, 2017,”³⁴.

Turkey had planned to purchase 100 F-35 Lightning II jets³⁵, however, recent legislation now prevents this sale until some prior conditions are met. On August 13, 2018, USA President Donald Trump signed into law the NDAA for fiscal year 2019. According to the 2019 NDAA under section 1282, the Secretary of Defense, in consultation with the Secretary of State, has 90 days to submit a report on the status of the USA relationship with Turkey to the Congressional defense committees as well as the Senate and House Foreign Affairs Committee³⁶. This report is to include an assessment of USA military and diplomatic presence in Turkey, an assessment of the S-400 purchase and the effects on the bilateral relationship, as well as an assessment of Turkey's participation in the F-35 program altogether. Until this report is delivered, the Department of Defense cannot deliver any F-35 aircraft to Turkey. Given the 90-day window, the report has until November 11, 2018 to be



completed. However, Turkey had already received its first two F-35 jets in June of 2018³⁷. The two aircraft are still technically under USA control, yet

during this time, Turkish pilots have already begun their training on the F-35 Lightning II at Luke Air Force Base in Arizona³⁸. This training is expected to last up to two years. It is worth noting that the

³⁴ Kelly L. (2017). “Rep. Cicilline seeks to block sale of fighter jets to Turkey in response to D.C. brawl” from *The Washington Times*. Available online: <https://www.washingtontimes.com/news/2017/jul/10/david-cicilline-seeks-block-sale-fighter-jets-turk/> (Last Retrieved: September 10, 2018).

³⁵ Gertler, J. (2018). “F-35 Joint Strike Fighter (JSF) Program” from *Congressional Research Service*. Available online: <https://fas.org/sgp/crs/weapons/RL30563.pdf> (Last Retrieved: September 10, 2018).

³⁶ <https://www.govtrack.us/congress/bills/115/hr5515/text> (Last Retrieved: September 10, 2018).

³⁷ Hellman, G. (2018). “Turkey receives its first F-35s amid congressional opposition” from *Politico*. Available online: <https://www.politico.com/newsletters/morning-defense/2018/06/22/turkey-receives-its-first-f-35s-amid-congressional-opposition-261911> (Last Retrieved: September 10, 2018).

³⁸ Doubleday, J. (2018). “DOD: Turkish pilots begin training on F-35s, but U.S. retains ‘custody’ of aircraft” from *Inside Defense*. Available online: <https://insidedefense.com/insider/dod-turkish-pilots-begin-training-f-35s-us-retains-custody-aircraft> (Last Retrieved: September 10, 2018).

USA stands to lose billions of dollars should they permanently prevent Turkey from purchasing its 100 F-35s.³⁹

In a recent move to dissolve the heightened-tensions, the USA government is once again attempting to sell its MIM-104F PAC-3 Patriot surface-to-air missiles systems to Turkey. The USA hopes to solve this crisis by providing Turkey with a suitable alternative to the Russian S-400 system. According to Tina Kaidanow, Acting USA Assistant Secretary of State for Political-Military Affairs, talks between the USA and Turkey over the purchase of an American-made air defense missile system have been ongoing since July of 2018⁴⁰. American officials have tried to emphasize the capabilities of the battle-tested PAC-3 Missile Segment Enhancement, as well as the interoperability between this system and the F-35 Lightning II. Turkey's purchase of the Patriot system could solve a significant series of complications in USA-Turkey relations, resolving fears of Russian exploitation of intra-alliance disputes, and potentially allowing Turkey to receive the intended delivery of F-35s. Whether or not the Turkish government can be persuaded is yet to be determined. Turkey may refuse the American offer based on other previously-mentioned existing disputes.

Turkish Response and Alternatives

Turkey is not just one of the biggest buyers of the F-35 program, but also a significant participant in the manufacturing process. There are 10 Turkish companies involved⁴¹, including Turkish Aerospace Industries (TAI), which has been supporting the F-35 Program since 2008. According to Lockheed Martin, TAI currently supplies production hardware that goes into every F-35 production aircraft⁴². In conjunction with Northrop Grumman, an American aerospace and defense company, TAI manufactures and assembles the center fuselages, produces composite skins and weapon bay doors, and manufactures fiber placement composite air inlet ducts. In total, participation from Turkish industries is expected to reach \$12 billion USD⁴³, which means that if

³⁹ Goren, N. (2018). "The cost of this bill to the US would be a minimum of \$20 billion, excluding the fact that the already stressed @LockheedMartin project would face new maintenance issues when no other @NATO ally is taking on the burden. #F35" from *Twitter*. Available online: <https://twitter.com/nilsugoren/status/989668574448050177?s=21> (Last Retrieved: September 10, 2018).

⁴⁰ Trevithick, J. (2018). "US trying to sell Turkey Patriot missiles to end spat over Russian S-400 purchase" from *The Warzone*. Available online: <http://www.thedrive.com/the-war-zone/22204/u-s-trying-to-sell-turkey-patriot-missiles-to-end-spat-over-russian-s-400-purchase> (Last Retrieved: September 10, 2018).

⁴¹ <https://www.f35.com/global/participation/turkey-industrial-participation> (Last Retrieved: September 10, 2018).

⁴² Ibid.

⁴³ Ibid.

Turkey is removed from the F-35 program entirely, the USA would need to find alternative means of production to replace participation from Turkish industries.



Turkey is determined not to be deterred by the actions of the USA Congress. In fact, Turkey is considering alternatives to the F-35 Lightning II. President Erdogan stated that Turkey needs F-35 jets and will continue to pay installments to procure them from the USA, but would procure jets elsewhere if the USA halts delivery of F-35s to Turkey⁴⁴. Just as Turkey went to Russia for

their air defense missile system, Turkey could potentially purchase Russia's Sukhoi Su-57, also a 5th-generation fighter jet. Turkey's other alternatives include purchasing China's 5th-generation fighter jet, the Chengdu J-20, or simply waiting until the completion of Turkey's indigenous 5th-generation fighter jet, the TAI TF-X. As a consortium member and essential manufacturer in the F-35 Joint Strike Fighter program, Turkey has gained valuable knowledge on 5th-generation fighter jet technology, which will allow them to become one of the few countries in the world with the technology, engineering infrastructure, and production capabilities required to produce a 5th-generation fighter jet. TAI is expected to produce a TF-X prototype by 2023 and have full production capabilities by 2029⁴⁵.

Conclusion

To encapsulate this complex situation, the USA and other NATO allies believe that Turkey's purchase of a Russian-made air defense missile system will be detrimental to the NATO alliance, and despite Turkey's repeated defense of their S-400 purchase and their status as a consortium

⁴⁴ No Author Indicated). (2018). "Erdogan: Turkey needs Russia's S-400 missile defense system" from *Al Jazeera*. Available online: <https://www.aljazeera.com/news/2018/08/erdogan-turkey-russia-400-missile-defence-system-180831103412006.html> (Last Retrieved: September 10, 2018).

⁴⁵ Roblin, S. (2018). "Is Turkey getting ready to build its very own stealth fighter?" from *The National Interest*. Available online: <https://nationalinterest.org/blog/the-buzz/turkey-getting-ready-build-its-very-own-stealth-fighter-25960> (Last Retrieved: September 10, 2018).

member in the F-35 program, the USA has moved to block the sale of approximately 100 F-35 Lightning II jets to Turkey. This response was enacted with the intent of encouraging Turkey to defer the purchase of the S-400 system as well as conclude the ongoing imprisonment of American pastor Andrew Brunson. It is clear that both the USA and Turkey have much to lose with the further deterioration of this alliance. Turkey is a strategic ally in the Middle East and a valuable partner for America's strategic geopolitical interests.

Unfortunately, this crisis over the S-400s and F-35s is only one part in a series of roadblocks when viewing the pathway of USA-Turkey relations. This current crisis incorporates many long-standing issues between the two NATO allies. The most recent move by the USA to block the sale of F-35s to Turkey illustrates this point, as the effort to impede delivery was organized partly to mount additional pressure on Turkey for the release of Andrew Brunson, who is likely to remain in Turkish custody for some time. Additionally, USA-Turkey relations were pushed to a near breaking point when disagreements over the USA-support for the YPG in northern Syria nearly led to armed conflict between the two NATO allies. Adding to the fray, President Erdogan, now considered an authoritarian ruler by many in Washington, D.C., was announced as the victor of Turkey's snap elections in 2018, meaning that he could potentially remain in power until 2028⁴⁶. However, there is still hope for a continuing alliance, given that halting the purchase of the S-400s would alleviate rising tensions, just as an agreement over the control of Manbij in Syria helped prevent open conflict between USA and Turkish forces in June of 2018.

Ultimately, Turkey's goal is to produce its own indigenous missile defense systems and 5th-generation fighter jets rather than exclusively relying on foreign-produced equipment. However, with an ongoing civil war raging in Turkey's neighboring country of Syria, Turkey is looking to bolster its defenses against potential threats sooner rather than later. Certainly, a mutually beneficial outcome that could remedy the current situation, at least in terms of military equipment, would be for the USA and Turkey to reach an agreement on the purchase and delivery of American MIM-104F PAC-3 Patriot air defense missile system over the Russian-produced S-400 Triumphs. After all, further economic interaction and strengthened security ties between current NATO members is truly and multilaterally advantageous.

⁴⁶ (No Author Indicated). (2018). "Turkey election: Erdogan wins re-election as president" from *BBC News*. Available online: <https://www.bbc.com/news/world-europe-44596072> (Last Retrieved: September 10, 2018).



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