

Background on the current US military presence in Germany

US military presence in Eastern Europe

With the end of the Cold War, the Two Plus Four Treaty of 1990 and the dissolution of the Warsaw Pact, there were also promises at the time to Russia (or the still existing Soviet Union) that there would be no eastward expansion of NATO, although not in written or contractual form. In the course of the gradual expansion of NATO that nevertheless took place, the NATO-Russia Founding Act on Partnership was concluded in 1997, which is to be regarded as a declaration of intent under international law. It literally states:

"NATO repeats that in the current and foreseeable security environment, the Alliance performs its collective defence and other tasks by ensuring the necessary interoperability, integration and reinforcement capability rather than by permanently deploying additional substantial combat forces."

This happened at a time when no Eastern European state was yet a member of NATO, but corresponding declarations of intent existed.

Since the beginning of the Ukraine crisis in 2014, NATO has increasingly conducted large-scale manoeuvres in the new Eastern European member states. Since then, combat forces of the USA and other NATO states have been increasingly stationed in Eastern Europe, but in formal compliance with the 1997 agreement according to the rotation principle. This means that they are exchanged after six months and are therefore not formally stationed permanently.

Since 2015, the U.S. Army has been constantly expanding its logistical presence in Germany and the Benelux countries as well as in Eastern Europe. This took place under Operation Atlantic Resolve, which initially involved the redeployment of approximately 500 military vehicles, including around 100 Abrams tanks. For their constant rotation between Eastern European and "old" NATO countries, the Coleman Barracks, among others, were set up as a "European Activity Set". As a logistical hub, this location came into focus especially during the preparations for the large-scale manoeuvre "Defender 2020".

U.S. Army Training Areas in Europe



Fig. 1 US soldiers inspecting military equipment in Grafenwoehr after delivery from the Coleman Worksite in Mannheim | Photo: U.S. Army / Destinee Rodriguez | 9.3.2022



Fig. 2: Bradley battle tanks being loaded onto a Bundeswehr heavy transport truck at the Coleman Worksite for deployment in Grafenwöhr (as part of the Bundeswehr's "Host Nation Support" | Photo: U.S. Army / Jason Todd | 15.3.2023. Note: The U.S. Army has its own heavy-duty transporters at the Coleman Worksite in Mannheim.

The most important U.S. Army training area in Germany is Grafenwöhr (in Bavaria).

Together with the neighbouring sites of Vilseck and Hohenfels, the Grafenwoehr military training area is the largest training location of the US Army outside the United States. Including the 2,000 to 3,000-strong brigades that exercise here for three months at a time, around 14,000 soldiers are stationed here.

Increasingly, U.S. Army exercises with large military equipment are also taking place in Eastern Europe, especially in Poland, the Baltic States, Romania and Bulgaria.

Due to the war in Ukraine, the military training areas in Germany have become even more important because of the training of Ukrainian soldiers that takes place here. Apart from Grafenwoehr, these are above all Hohenfels (also in the Upper Palatinate) and Baumholder (in Rhineland-Palatinate).

Exercises such as Defender Europe have the task of practising transport and storage logistics as well as testing the cooperation of the various national military units..



Fig. 3: Military vehicles on the Coleman Worksite, source: Google Earth, May 2021

U.S. Army logistics centres in Europe

"Army Prepositioned Stock" (APS) is the name of a U.S. Army system that was known as the "European Activity Set" until 2015. With the new designation, a uniform system for U.S. Army logistics was introduced that is geared towards a worldwide operational capability. In essence, this entails that regional logistics centres enable the rapid redeployment of combat troops who find their military equipment on the spot. This means that, above all, large military equipment with armoured vehicles are available relatively close to possible deployment sites for exercises and war operations.

For this purpose, seven regions have been defined worldwide, with APS-2 standing for Europe and APS-7 for Africa. Five locations are defined for Europe, three of which belong to the U.S. Army Garrison Benelux

- Dülmen, Germany (North Rhine-Westphalia)
- Egelshoven, Netherlands
- Zutendaal, Belgium

Other locations are Coleman Barracks in Mannheim (U.S. Army Garrison Rhineland-Palatinate) and Powidz in Poland. The latter belongs indirectly to the U.S. Garrison Rhineland-Palatinate, as the battalion in charge is located in Mannheim.

Another European location is Livorno in Italy (port city near Pisa). However, Livorno is designed for operations in Africa and thus belongs to APS-7.

At the Powidz site, there is an air base of the Polish military (33rd Air Base). Starting in 2019, this was developed as a logistics centre, which was officially opened in April 2023 after completion of the extensive construction work. The building complex includes, among other things, five warehouses, each measuring 200 x 60 m (length x width) and a newly constructed railway siding. The large military equipment with air-conditioning systems is stored in these warehouses. Furthermore, the complex contains a large workshop for maintenance and repair as well as an ammunition depot.



Fig. 4: Model drawing of the new APS-2 in Powidz. The runway of the 33rd Air Base can be seen in the background. Photo: U.S. Army

Zutendaal in Belgium has been considerably expanded in recent years, from 15 to 23 air-conditioned warehouses (size 60 x 60 m each).

Eygelshoven in Holland consists of eight air-conditioned warehouses (size 90 x 55 m each), among others.

In a U.S. Army fact sheet from 2020, the warehouses in **Mannheim** are described as "temporary" in contrast to the locations mentioned elsewhere. This is understandable because the large military equipment is stored outdoors and not in air-conditioned halls.

For Europe, these stockpiles are relevant not only for use on regional military training areas such as Grafenwoehr, but above all for:

- Series of large-scale exercise Defender Europe (annually since 2020).
- Delivery of war material to Ukraine



Fig. 5: APS-2 sites and associated U.S. Army military structures.

(Powidz is outside the map section between Poznan and Warsaw). Graphic: Own illustration

Note: The permanent stationing of a battalion like AFSBn Mannheim on the scale of "only" 500 military personnel would also require a civilian housing infrastructure, which would be relatively costly.

U.S. Army logistics structure in Europe

Material deliveries from the USA have been made to locations in the Baltic States (Estonia, Latvia, Lithuania), Poland, Romania and Bulgaria for war manoeuvres since 2015 and to Ukraine for direct war operations since 2022.

The military structure responsible for the APS-2 is the 405th Army Field Support Brigade (AFSB). This in turn consists of several battalions (AFSBn). The responsibilities of the Mannheim-based AFSBn were transferred to Dülmen in 2021. Since then, the Mannheim-based AFSBn has been responsible for the Powidz APS-2 site.

The higher-level operational command unit for the AFSB is the 21st Theatre Sustainment Command based in Kaiserslautern. Overall, these structures are subordinate to Headquarters US Army Europe (and Africa), which was relocated from Heidelberg to Wiesbaden-Erbenheim in 2012.

The APS described above are designed in such a way that the 405th AFSB can supply four combat brigades.

The U.S. Army Garrison (USAG) Rhineland-Palatinate is also home to the Army Support Activity Black Sea, which is responsible for two southeastern European locations:

- in Romania, the Mihail Kogalniceau Air Base, which is heavily used by the U.S. Air Force
- in Bulgaria, the Novo Selo Training Area.

The 405th AFSB is also responsible for the regional logistics centres, including the Logistics Readiness Centre Rhineland-Palatinate in Baumholder.

Logistics hub Rhineland-Palatinate



Fig. 6: Logistically important individual locations of the U.S. Garrison Rhineland-Palatinate and the Baumholder military training area. Graphic: Own representation

Notes on the sites listed:

- Germersheim: Hazardous materials storage facility under the control of the civilian U.S. Defense Logistic Agency (DLA).
- Pirmasens: U.S. Army Medical Materiel Center-Europe.
- Sembach: Headquarters of the 30th Medical Brigade for medical support for operations in Europe and Africa.
- Miesau: Largest ammunition depot of the US military worldwide
- Ramstein: Most important transport hub of the U.S. Air Force worldwide
- Near Ramstein: Landstuhl Regional Medical Center as largest US hospital outside the USA / New building in Weilerbach adjacent to the air base
- (military training area) Baumholder: Logistics Readiness Center Rhineland-Palatinate

The entire USAG Rhineland-Palatinate, including Mannheim, contains the most important logistical hub of the US military worldwide. The total number of soldiers and civilian employees is about 22,000. The U.S. Air Force in Ramstein has a significant share of this. In addition, there are about 25,000 family members and service providers.

On the life cycle assessment of the military

Many municipalities in Germany are developing carbon zero activities. However, this does not take into account site-related activities that are accounted for elsewhere. In addition to military air traffic, which also includes transport flights for land vehicles and helicopters to the military training areas, this also applies to the ground-based logistics of the armed forces and the high volume of transport.

Military training areas are usually not located near larger military stationing sites, but in rather remote regions, such as Grafenwöhr. In addition, there is the rotation principle for the exercise presence in Eastern Europe. This also results in increased demands on the infrastructure of the German railways and the German trunk road network. Due to a lack of transparency, it is not possible to estimate how much of the corresponding expansion planning is due to military requirements.

In particular, the excess width of the battle tanks and the high weight requirements result in high carbon emissions both from the "dual use" expansion of the civilian transport infrastructure and from the civilian means of transport. These are likely to far exceed the actual carbon emissions of exercise operations. This is true despite the horrendous specific consumption figures of several hundred litres of fuel per 100 km for armoured vehicles, which, however, are only for short distances. For comparison: The distance in road kilometres from Mannheim to the military training area Grafenwöhr is about 330 km and to the APS-2 site Powidz about 950 km.

Balancing the carbon emissions and other resources of the armed forces therefore requires the recording of a large number of capital and consumer goods, purchased services, civilian transport processes, structural facilities and the commuting of military and civilian personnel.