

# GERMAN MILITARY AVIATION AUTHORITY

Competence and Safety for Military Aviation



**BUNDESWEHR**



## MAJOR GENERAL DR. JAN KUEBART

### DIRECTOR-GENERAL, GERMAN MILITARY AVIATION AUTHORITY

Dear reader,

The framework conditions of aviation and military aviation, in particular, become more and more complex. Hardly any branch of the armed forces has so many high technologies, digital networks, and systems. International collaboration projects become standard. It is important to establish cross-border regulations, uniform standards for operation and training, and interoperability among the allied armed forces. Only together can we master the future challenges of military aviation.

Against this backdrop, the German Military Aviation Authority (GMAA) was founded in 2015. We combine the expertise of the Bundeswehr on safety in military flight operations under one umbrella and concentrate the many associated yet different competences. As a result, our office assumes an important role since this approach established an organization that always takes a holistic perspective on military aviation issues and, in addition, has the necessary regulatory powers.

We use short coordination processes to provide fundamental work in ensuring safe flight operations for the flying units of the Bundeswehr and develop the associated regulations. Our expertise covers the entire life cycle of military aircraft: from development to certification to operational permissions, and standardization and licensing of personnel.

We are a competent partner to all flying elements of the Bundeswehr and find the best solutions together with them for the operational readiness of the forces. Besides, we are the interface to both national and international authorities, armed forces, and enterprises in all issues with regard to military flight operations.

With this brochure, I would like to cordially invite you to get an overview of the multi-faceted work of our aviation office!!



- » FUTURE-ORIENTED PREPARATION AND FURTHER DEVELOPMENT OF REGULATIONS FOR MILITARY AVIATION
- » CERTIFICATION OF BUNDESWEHR AIRCRAFT AND AERONAUTICAL SYSTEMS, INCLUDING SUPPLEMENTARY EQUIPMENT
- » REGULATION AND STANDARDIZATION OF MILITARY FLIGHT OPERATIONS IN GERMANY
- » CERTIFICATION AND RECOGNITION OF AGENCIES, AUTHORITIES, AND INSTITUTIONS
- » LICENSING OF FLYING, TECHNICAL, AND AEROMEDICAL PERSONNEL

OUR CORE COMPETENCES

# DIVISION 1

## Strategy, Policy Matters, Rulemaking, and Common Tasks

Division 1 of the German Military Aviation Authority (GMAA) with its policy documents on the implementation of the Aviation Act, international agreements, and provisions as laid down by the FMoD defines the regulatory framework for military aviation in Germany, and the technical work of Divisions 2, 3 and 4 of the GMAA. In the process, Division 1 incorporates the technical expertise and practical application experience available in these divisions. Another responsibility of the division is to represent strategic and fundamental positions with regard to military aviation in national civil-military bodies as well as international organizations and working groups, possibly in coordination with the FMoD in order to advance matters of military aviation. With its single legal expertise, Division 1 reviews and evaluates all legal issues in the context of the technical tasks of the GMAA, provides legal advice in this respect to the directing staff personnel and the organizational elements of the GMAA, and makes decisions on aviation law issues within its assigned range of tasks for the Bundeswehr. Division 1 of the GMAA is composed of the following five Sections 1a to 1e.

### Planning and Strategy

Section 1a Planning and Strategy develops strategic positions of the GMAA, evaluates and coordinates policy matters in both national and international cooperation, prepares concepts for the implementation of strategic provisions within the GMAA, and processes common cases of interdisciplinary general significance. For example, Section 1a evaluates the future developments that accrue within the scope of the EU initiative Single European Sky (SES), coordinates German positions with the FMoD, and coordinates the integration of techni-

cal expertise of the Bundeswehr as an active contribution to these developments. Strategic positions are held in committees with organizations such as the European Defence Agency (EDA), the European Union Aviation Safety Agency (EASA), NATO, and EUROCONTROL in order to prepare and co-determine mutual positions. This enables strategic foresight to help shape future developments for the benefit of mission-tailored and safe military aviation in an anticipatory manner. In this way, the Planning and Strategy section makes an important contribution to preserving the military aviation's unimpeded access to the common airspace used by military and civil users alike as well as to maintaining or even improving aviation safety.

### Airworthiness Verification and Certification Policy Matters

The main task of Section 1b is to prepare, update, coordinate and publish general provisions with regard to verification and certification policy matters for manned and unmanned Bundeswehr aircraft, aeronautical equipment, and non-essential equipment. Currently, this covers two different regulatory frameworks: the German Military Airworthiness Requirements (DEMAR) standard procedure based on Europe-wide requirements for the airworthiness of military aircraft, and the national legacy procedure, which continues to be the basis for the certification and operation of many airborne weapon systems introduced in the Bundeswehr. As the issuing authority of the regulations mentioned above, Section 1b immediately participates in the processing of specific weapon system projects in order to resolve basic regulatory issues, makes decisions with regard to weapon system-specific interpretations of its

regulations, and prepares exemptions for individual deviations, if required. There are close cooperative relations with different national bodies and international organizations, such as NATO, NATO agencies, the European armaments agency OCCAR, and the European Defence Agency (EDA). At the EDA, Section 1b represents the GMAA within the scope of the Military Airworthiness Authorities (MAWA) Forum and its associated advisory groups. This has resulted, for example, in the European Military Airworthiness Requirements (EMAR) that are harmonized throughout Europe in accordance with the EASA regulatory landscape and form the basis for the DEMAR standard procedure. Further results of the participation in EDA working groups are the general requirements for certification, flight operations, and technical operations of unmanned aircraft systems within the Bundeswehr which take the civil European regulations into account.

### Flight Operations Policy Matters

Section 1c controls, coordinates, and makes decisions in the preparation of military aviation policy documents, taking both national and international developments into account. As part of this, national and international principles and regulations are considered by evaluating potential impacts on military flight operations.

The section prepares regulations that specify the standards for manned and unmanned flight operations and define deviations from the provisions laid down in the German Aviation Act as per section 30 of the Act for the sectors of manned and unmanned flight operations, the air mission control service (tactical air command and control service, and military air traffic services), and the licensing of parti-

cipants in Bundeswehr flight operations.

This superordinate standardization also forms the foundation for subordinate implementation regulations that are issued or implemented in other divisions of the GMAA.

GMAA Section 1c is also an element of the civil supervisory authority (see Page 13), and coordinates the introduction of Bundeswehr unmanned aircraft systems via the UAS officer within the GMAA.

### Air Law Matters

Section 1d provides advice to the Director-General of the GMAA and the Bundeswehr agencies in legal issues in the context of military aviation.

The topics range from airworthiness verification and certification to the approval of organizations, licensing of personnel and issues related to flight operations, flight safety, and aviation medicine. On behalf of the Federal Ministry of Defence (FMoD), the section contributes to air law legislative procedures and the issuance of pertinent legal ordinances.

Building and operating military airfields requires an approval in accordance with air law. An approval must be amended if there are plans to extend or modify the airfield or the airfield operations to a substantial extent. In such cases, Section 1d is responsible for making decisions.

The section also assumes or supports the conduct of cases related to air law. Furthermore, it performs further aviation authority tasks in accordance with the German Aviation Act. This includes directives issued to protect against aviation safety hazards, and to ensure the necessary obstacle clearance. In addition, Section 1d processes requests for authorization to erect air traffic obstacles in construction restriction zones. This is particularly relevant, for example, for the erection

of construction cranes in the vicinity of airfields.

And finally, Section 1d reviews and issues permissions for landings of military aircraft outside approved airfields.

### Implementing Provisions for Technical Operations

In addition to the military rules of procedure and operating instructions, Section 1e also prepares the basic implementing provisions for the training of aircraft engineering personnel.

In detail, this includes the implementation of air law requirements and superordinate provisions into procedural principles and regulations for the safe operation of aircraft, aeronautical equipment, and non-essential equipment within the sphere of operational responsibility.

In addition, the section ensures the technical assistance required for the evaluation of international arrangements (e.g. by the EASA) and multinational military arrangements with regard to their impacts on national military regulations/provisions.

Another functional area of Section 1e deals with the preparation and updating of product-independent regulations and standards concerning more than one major organizational element for the technical management of aircraft, aeronautical equipment, and non-essential equipment in flying units, facilities, and agencies. This also includes the preparation of fundamental principles for aircraft engineering training.





## DIVISION 2 Certification

As per the provisions of the German Aviation Act, aircraft may only fly inside German airspace when they have been certified for this purpose. Besides airplanes and helicopters, this also applies to unmanned aerial vehicles, and, likewise, to military aircraft.

However, the national Aviation Act takes into account the Bundeswehr-specific issues in this respect, and provides appropriate options for deviation. The Bundeswehr has issued its own administrative regulations in order to manage these deviations.

Type certification is required for each new or modified type of aircraft or aeronautical equipment. For this purpose, the specific underlying design and/or construction is verified for airworthiness.

An essential part of type certification is the type inspection that serves to officially verify the airworthiness of a specific type of aircraft or equipment.

On this basis, airworthiness certification may be granted to each single production unit of the respective type when the individual compliance document of airworthiness of this aircraft, aeronautical equipment or non-essential equipment is available, i.e. when the aircraft complies with the applicable design regulations and/or operating instructions.

In general, this principle applies to any kind of aeronautical equipment whose airworthiness is to be demonstrated. However, also for newly introduced or modified equipment, which is often used commonly in various types of aircraft, Division 2 staff must verify whether its operation would impair airworthiness.

Type inspection is carried out by specifically trained and licensed inspection personnel. These personnel also define the scope and criteria for inspection so that, finally, an appropriate type certificate may be granted. In the process, the scope and crite-

ria of compliance demonstration are oriented towards the safety level in civil aviation.

Besides type inspection and type certification, Division 2 of the German Military Aviation Authority is also responsible for granting airworthiness certifications for all Bundeswehr aircraft.

Furthermore, the Division 2 functional area includes the central reporting office of the GMAA for deficiency reports related to Bundeswehr flight operations and a special responsibility for non-destructive materials testing of aeronautical equipment in the Bundeswehr.

Thus, all competences and responsibilities in the area of military certification of the Bundeswehr have been combined in Division 2 of the German Military Aviation Authority.

### **i** FOCUS ON TYPE INSPECTORS OF DIVISION 2 – THE WAY TO BECOME A TYPE INSPECTOR:

The basic prerequisite for the training to become a type inspector at the German Military Aviation Authority is a successfully completed technical course of study.

The training is usually provided under guidance over a period of four years on the basis of a training plan in GMAA Division Certification. In the process, the prospective type inspectors are supported throughout their training by experienced type inspectors acting as mentors, and are gradually involved in the projects.

At the same time, theoretical training is carried out in a multitude of internal and external courses and workshops. When all demonstrations for the qualification required have been provided, training will be completed by obtaining the type inspection license. The associated great responsibility is rewarded by paying a bonus.

**98**  
STAFF

**75**  
TYPE INSPECTORS

**1.400**  
STATEMENTS ON CERTIFICATIONS PER YEAR

## DIVISION 3

### Flight Operations Matters

Division 3 controls and monitors all flight operations matters and other related topics. Besides the responsibility for or contributions to flight operations rules/regulations, this also comprises the regulation and standardization of the entire military flight operations in Germany, including the definition of standardization principles and the conduct of standardization visits. The division also assumes the function as control and planning authority for human factors, i.e. the human influencing parameter, in Bundeswehr flight operations.

Furthermore, Division 3 is responsible for the regulatory foundations of the air mission control service that is comprised of the

- military air traffic service,
  - tactical air command and control service, and
  - joint fire support (JFS),
- as well as the aeronautical information management as another component in operational and technical respect.

In addition, military flight operations are monitored by means of a central database. In case of incidents, the division assists in the associated evaluation, and it also operates a telephone hotline for the public. Division 3 provides advice to industry and local authorities, and prepares position papers for construction projects — ONSHORE wind turbines, in particular — that are planned to be erected within the military area of interest and points out approaches to solutions in cases of conflict. The division has further responsibility for the definition of principles to ensure geoinformation support for and during flight operations,

the performance and implementation of statutory protective tasks, fire protection in Bundeswehr flight operations, transportation of hazardous goods in military flight operations, aviation security, and the military search and rescue service (milSAR).

#### Flight Operations

Branch 3 I Flight Operations prepares the basic flight operations regulations, operates the Bundeswehr Flight Operations Monitoring and Information Centre, conducts flight standardization within the Bundeswehr, and is the control authority for human factors. In addition, the branch provides geoinformation expertise to the GMAA.

The Flight Operations Principles section is tasked with elaborating and issuing general and mission-related flight operations regulations for manned and unmanned aircraft as well as granting exemptions to existing provisions and regulations for flight operations. Furthermore, flight operations protection zones around intensely radiating electromagnetic sources are calculated.

The Flight Operations Monitoring and Information Centre monitors, examines and archives data on military flight movements. It is thus capable of verifying the correct application of flight operations provisions, and providing tailored information on military flight operations to citizens, politicians, and authorities.

The technical section Standardization/Human Factors is responsible for the flight standardization of units conducting manned or unmanned flight operations, and as control and planning authority, it is also responsible for human factors in Bundeswehr flight

operations. Furthermore, the section handles proposals for the amendment of aviation regulations, and ensures the quality management in the field of flight operations. Besides immediate geoinformation support to the GMAA divisions, the Geoinformation Affairs section processes principles for pilot briefings and weather observation for Bundeswehr flight operations, and for geoinformation support related to navigational and simulation data for Bundeswehr airborne weapon systems. In this context, contributions to both military aviation and geoinformation regulations are prepared likewise.

#### Flight Support

Branch 3 II Support has two liaison offices and five sections. Both the German Military Aviation Authority and the civil Federal Supervisory Authority for Air Navigation Services have been reported to the European Commission as national supervisory authorities for air traffic control. On the basis of an agreement concluded between the two offices, a common liaison office is run to ensure close technical cooperation and account for the idea of harmonizing safety supervision, in particular. For the purpose of preparing, coordinating and cooperating in the determination of the German military viewpoints with regard to air traffic management within NATO, the EU (including the EDA), and EUROCONTROL as well as further international organizations (EASA, ICAO etc.), the German Military Aviation Authority operates a liaison office located at the EUROCONTROL headquarters in Brussels.

Based on European provisions and standards, Section 3 II a assumes the task of performing safety supervision over the air mission control service in close coordination with the standard-

setting sections. The major tasks include technical and operational testing of systems prior to releasing them for operation — even in case of modifications to these systems. Thus, the section ensures the provision of safe processes and systems to support military air traffic in Germany and on missions outside Germany. The requirements for the air mission control service providers specified within the scope of a quality and safety management system are described there, and verified in coordination with the Division 4 experts at regular intervals. The Regulation of the Military Air Traffic Service/Flight Dispatch Service section is responsible for the preparation of technical provisions with regard to the organization, operation, and air traffic service systems of the military air traffic service. This includes the management of regulations, e.g. for permission and testing as well as initial and follow-on training of air traffic services personnel.

The Regulation of the Tactical Control Service section is responsible for the specification of standards for the provision and performance of services rendered by the tactical control service to support operational air traffic as well as for joint fire support (JFS).

In addition, the section prepares specifications for the operation of technical systems within the tactical air command and control service.

The responsibility for the basic regulation of aviation security in military flight operations rests with another section charged with the subject area of aviation security.

With respect to the use of commercial airlift capacity, the section is also responsible for the basic regulation related to the implementation of relevant provisions for civil aviation (EU regulations and the Aviation Security Act). The section is the highest supervisory authority within the subject area of aviation security for the FMoD area of responsibility. Recognitions,

approvals, and licensing as quality assuring activities are carried out either by the German Military Aviation Authority itself or within the scope of the safe supply chain for the Bundeswehr logistics system in cooperation with and through the Bundeswehr Logistics Command in coordination with the German Military Aviation Authority.

The Statutory Protective Tasks subject area cooperates closely with the Federal Office of Bundeswehr Infrastructure, Environmental Protection and Services. In this context, it provides the technical expertise for flight operations, and contributes to the preparation of regulations related to statutory protective tasks. In addition, the subject area provides pertinent advice to the office's directing staff personnel. Moreover, the functions of the Occupational Safety Officer and the Fire Protection Officer of the office are assumed by personnel of this section.

The Infrastructure section evaluates construction projects with regard to military flight operations, and represents them vis-à-vis the Federal Office of Bundeswehr Infrastructure, En-

vironmental Protection and Services as a public body. For this purpose, the staff of the section prepare position papers for the competent approving bodies relating to wind turbine (ONSHORE) construction projects within the area of military interest (Bundeswehr and allied armed forces), and are closely involved in providing advice to and resolving conflicts with industry and local authorities. Further tasks include the request of obstacle lighting based on the local conditions, and the evaluation of radar and navigational interference to military flight operations in accordance with section 18a of the German Aviation Act. Furthermore, the section is responsible for the preparation of position papers on any construction measures in the construction restriction zone at military airfields in accordance with both national and international regulations.





# DIVISION 4

## Recognition, Approval, and Licensing

In order to ensure maximum aviation safety, aviation organizations, facilities, and companies as well as personnel performing tasks that require licensing are subject to official supervision. Division 4 assumes this supervisory responsibility for the concerns of the Bundeswehr on a centralized basis.

### Recognition of Foreign Military Aviation Authorities

Division 4 carries out the recognition of foreign military aviation authorities.

Recognition is the basis for using the outcomes of other aviation authorities within the own regulatory framework. This includes, among others, statements regarding the certification of aircraft, approval of companies, and licensing of aviation engineering personnel.

For the performance of the tasks mentioned above, the European Military Airworthiness Document - Recognition issued by the European Defence Agency provides guidance for action.

In case of a recognition, it will be confirmed that processes and standards applied by a foreign authority are comparable to own processes and standards.

This will create an essential prerequisite to allow multinational interoperability.

### Approval and Monitoring of Organizations, Facilities, and Companies

Division 4 is also responsible for the approval and monitoring of military and commercial aviation organizations, facilities, and companies that carry out tasks that are subject to air law and require licensing. In detail, these are aircraft operators (including flying schools) and organizations that develop, manufacture, or maintain aviation products/services or supervise

the operation of such products/services, and are authorized to issue the associated certifications and certificates.

The tasks mentioned above are completed by granting permissions of product tests for airworthiness, and the qualification of flight simulators.

### Licensing of Personnel

Another field of tasks concerns the licensing of personnel that perform activities relevant to air law. On principle, licensing is performed in accordance with Bundeswehr military provisions and regulations, but may also be carried out in accordance with European Union Regulation No. 1178/2011 if the Flying Service is concerned. For this purpose, the GMAA was reported to the EU Commission as civil supervisory authority and is, thus, part of the German civil aviation administration. Division 4 coordinates the relevant tasks for the GMAA. In this context, licensing is performed for pilots as well as instructor and inspection personnel.

**110**  
STAFF

**192**  
SITES SUPERVISED

**2.000**  
LICENSES PER YEAR

**14**  
RECOGNISED AUTHORITIES



# DIRECTORATE FOR BUNDESWEHR AVIATION SAFETY

## Ensuring Aviation Safety in the Bundeswehr

The Directorate for Bundeswehr Aviation Safety is responsible for policy matters and the technical control of measures at the German Military Aviation Authority to ensure aviation safety in the Bundeswehr. The range of tasks includes, among others, performing aviation safety inspections at and/or information visits to all Bundeswehr units that conduct military flight operations as well as Bundeswehr-own maintenance facilities, and training centres. The examination and inspection results obtained are evaluated and subsequently serve to prepare recommendations and establish requirements to improve the aviation safety situation. These recommendations and requirements will then be made available to all Bundeswehr units. The Directorate for Bundeswehr Aviation Safety is also responsible for the verification and supervision of all aviation safety regulations and provisions, and for the issuance and amendment of rules laid down to ensure safety during flight operations. Moreover, two further main tasks are

the Directorate's responsibility for aviation safety training in the Bundeswehr, and the cooperation in both national and international aviation safety committees. In addition, the Directorate for Bundeswehr Aviation Safety conducts projects, such as national and international aviation safety seminars for command personnel, aviation safety expert meetings, and international aviation safety forums.

### Flight Incident and Accident Investigations

A core task is the investigation of incidents and accidents during Bundeswehr flight operations, including cooperation with the German Federal Bureau of Aircraft Accident Investigation in investigations of incidents involving both civil and military aircraft.

Within the scope of incident and accident investigations, the Directorate for Bundeswehr Aviation Safety acts autonomously and is not bound by instructions.

Besides an aviation safety database for the analytic evaluation and statistic acquisition of accidents and incidents involving Bundeswehr aircraft, the Directorate for Bundeswehr Aviation Safety also operates a flight recorder and flight data evaluation station.

### Publications

The Directorate's own editorial office prepares publications for print media and videos, in which articles having a present context or general character are reviewed and published for the expert audience. These publications are intended to sensitize all personnel involved in aviation and increase aviation safety awareness.

In addition, all publications are always available in digital form on the intranet for members of the Bundeswehr.

## **i** THE VOLUNTARY REPORTING SYSTEM

*"Nobody is fond of errors. But we are obliged to learn from them. Although it is our natural tendency to forget or even conceal errors. By doing so, we are wasting a precious good — the good to learn from errors."*

Quote: Dr. Alan Diehl, National Transportation Safety Board (NTSB), USA

As an additional component of the manned and unmanned Bundeswehr aircraft flight operations safety culture, the Directorate for Bundeswehr Aviation Safety operates a voluntary reporting system. The reporting system is meant to ensure that observations, peculiarities, and incidents that might jeopardize the safe conduct of flight operations are collected and processed in a management system on the basis of voluntary reports. The objective of this system is to learn from the insights obtained and consider them in own future actions. It is intended that all persons directly or indirectly involved in Bundeswehr flight operations and all other Bundeswehr members performing observations related to flight operations contribute to the voluntary reporting system. The voluntary reporting system is based on the trustful handling of reports of incidents and/or shortcomings that are non-conforming and/or relevant to aviation safety, and requires superiors and all personnel involved in Bundeswehr flight operations to maintain a just culture that focuses on learning from errors rather than punishing incorrect behaviour. Thus, the voluntary reporting system depends on a culture of mutual trust that encourages all Bundeswehr members to report pieces of information relevant to aviation safety, which are not acquired via the existing incident reporting system.

Reports to the voluntary reporting system may be anonymous. Names and personal data of the reporters will only be forwarded from the system if the person concerned expressly agrees anyway.

The focus of the voluntary reporting system is on human behaviour, not on technical malfunctions.

## DIRECTORATE FOR BUNDESWEHR AVIATION MEDICINE

With three organizational positions, the Directorate for Bundeswehr Aviation Medicine is a rather small team in the German Military Aviation Authority. It develops aeromedical fitness requirements for the medical assessment of Bundeswehr aviation personnel. The same applies to provisions with regard to human performance training (aviation physiology) for Bundeswehr aviation personnel. National and international legal norms as well as civil and military fundamentals are taken into account for this purpose. Within the German Military Aviation Authority, the Directorate for Bundeswehr Aviation Medicine acts as an adviser to the specialist divisions to ensure flight operations from the aeromedical perspective, e.g. in issues regarding the human factor (duty hours and rest periods/time zones), medical emergency services at airfields as well as issues regarding the licensing of Bundeswehr aeromedical experts. In addition, the directorate provides the Medical Adviser to the German Military Aviation Authority, whose general task is to advise the agency head in all issues of medical care, health care, preventive health care as well as the operational and command doctrines of the Bundeswehr Medical Service.

### National and International Cooperation

Even beyond the office, the Directorate for Bundeswehr Aviation Medicine is a competent point of contact with regard to aeromedical issues at the national and international levels. Examples include:

Close technical coordination with the Air Force Centre of Aerospace Medicine.

The provision of the national delegate in the Aeromedical Working Group of the NATO Standardization Office.

Participation in the Medical Expert Group of the European Aviation Safety Agency (EASA) and the related body, the European Aviation Medical Assessors Council (EAMAC).

Cooperation with the Federal Supervisory Authority for Air Navigation Services in the field of medical fitness of civil air traffic controllers, which includes participation in examinations of civil physicians and medical organizations working for the Federal Supervisory Authority that are referred to as Aeromedical Examiners (AME) and Aeromedical Centres (AeMC).

Technical cooperation with the Federal Aviation Office in aeromedical matters.

### **i** TECHNICAL EXAMINATION AS AN EXAMPLE OF INTERNAL

Within the scope of technical examinations for Section 4 II a, the three staff members re-licensed a total of 89 Bundeswehr aeromedical experts in 2022. In addition, 13 training and advanced training courses were reviewed by the specialist staff and the courses' contents and relevance were evaluated from the aeromedical perspective.





# FLIGHT OPERATIONS AND LEGAL FOUNDATIONS

## General Information

The leading idea of aviation is to cover the distance between two locations as fast and cost-effective as possible. For this reason, civil airlines have the pilots of their airplanes fly the shortest route at the highest possible altitude where the aircraft consume less fuel and, thus, save money. In the first place, military flight operations are also conducted in line with this principle of efficiency. However, there are different provisions that apply to the employment of fighter aircraft and the associated training. This sphere of action requires speed, extreme flight manoeuvres, tactical superiority, and fire power. Aircrews and aircraft practice realistic military scenarios, such as air defence missions, close air support, or low-level flights in order to be able to master such manoeuvres in case of war. For this purpose, the flying wings use the exercise airspaces established throughout Germany and, in some cases also within international airspace, at foreign training bases (e.g. in the USA), or during international air defence exercises, in particular.

### The key principles of all flights are:

- 1) safety in the airspace,
- 2) resource-saving employment of personnel and materiel, and
- 3) impairment of the environment and population to the lowest extent possible.

For example, aircraft noise cannot be avoided but the Bundeswehr has voluntarily committed to reducing it to the extent absolutely necessary and to split it to different regions in order not to stress certain regions more than necessary. In addition, planned exercises involving flight operations beyond the daily routine — also in concert with international armed forces — will always be announced in advance.

Some military aircraft are also used for civil tasks, such as reconnaissance flights to observe dikes during floods and to search for persons, or rescue missions.

For example, the Bundeswehr operates some of the rescue helicopters employed in Germany. These primarily serve to conduct search activities and provide assistance in case of accidents in civil and military aviation, but are as well requested for civil rescue missions on a regular basis. The aircrews must be capable of flying and picking up injured persons during the night, in bad weather, and in rough terrain — from the air or on the ground by landing in unknown terrain.

For this reason, it is unavoidable to practice flights with such a mission profile on a regular basis under realistic conditions, in rough terrain, and also during the night. On principle,

military flight operations are subject to the same laws and regulations as general civil flight operations.

This arrangement is based on the German Aviation Act, which is equally applicable to both military and civil aircraft, and is updated on a continuous basis. To accomplish military missions, it may be necessary to make use of special regulations for the Bundeswehr and/or international armed forces to the extent required "by taking public safety and order into account to accomplish the mission".

Such special regulations are based on section 30 subsection (1) of the German Aviation Act. They are defined in greater detail in coordination with the Federal Supervisory Authority for Air Navigation Services and the German Military Aviation Authority, and are laid down in the Military Aeronautical Information Publication (MilAIP) as well as service regulations.

### **i** CENTRAL DATABASE FOR MILITARY FLIGHT OPERATIONS

The central database for military flight operations permanently collects and stores all flight movements over Germany on 365 days per year and 24 hours per day. In case of military aircraft, all military flight movements from the ground up to the boundary of space are collected. The data required for this purpose are provided by a network of civil and military radar sensors whose sweep areas cover the entire federal territory. In individual cases, however, there may be coverage gaps in radar detection due to geographical conditions (such as valleys or depressions), in particular. All radar data are stored for three years so as to be able to manage future requests. The data acquired cannot be modified, thus maintaining their validity. Besides radar data, further pieces of information relevant to flight operations are stored in the database. These include flight plans, weather messages, airspace structure, and aviation regulations.

## HOTLINE

**MONDAY – THURSDAY**  
08:00-17:00

**FRIDAY**  
08:00-12:30

**0800-**  
**8620730**



### DO YOU HAVE ANY QUESTIONS OR WANT TO REPORT FLIGHT MOVEMENTS?

By calling freephone 0800 - 8620730, all citizens can directly contact the German Military Aviation Authority with their questions or complaints regarding military flight operations.

As a special service offered, the Flight Operations Monitoring and Information Centre staff as single point of contact will answer questions with regard to aircraft noise and low-level flying. The hotline is available Monday to Thursday between 8:00 and 17:00, and Friday between 8:00 and 12:30. If you cannot reach us personally, you can leave a message on our answering machine.

For more detailed inquiries or complaints, we recommend sending an e-mail. Especially in case of complaints about military flight movements, we will need more specific details for an investigation. Please send your e-mail to:

[FLIZ@bundeswehr.org](mailto:FLIZ@bundeswehr.org)

#### HO? — NAME, ADDRESS, AND CONTACT INFORMATION

**WHAT? — WHAT DID YOU OBSERVE (E.G. JET AIRCRAFT IN LOW-LEVEL FLIGHT, HELICOPTER LANDING, ETC.) AND WHAT QUESTIONS DO YOU HAVE REGARDING YOUR OBSERVATIONS?**

**WHEN? — DATE AND TIME**

**WHERE? — PLACE**

In particular, the details on place, date, and time are important. Considering the number of flight movements above Germany, we can otherwise not exactly assign your observation to military or civil aviation.

# THE COAT OF ARMS

## German Military Aviation Authority

The coat of arms of the German Military Aviation Authority shows a federal shield (federal eagle) in its centre, documenting the position of the office as a higher federal authority. The red edging of the coat of arms indicates that the Chief of Defence is the immediate superior of the office. The wing in the lower part of the coat of arms is a general symbol of aviation. The stylized silhouette of an aircraft is followed by a three-coloured tail symbolizing German Army, German Air Force, and German Navy, all of which fall under the responsibility of the German Military Aviation Authority. The globe is a symbol of the international orientation of the German Military Aviation Authority.



## EDITORIAL INFORMATION

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