REPUBLIC OF TURKEY
MINISTRY OF ENVIRONMENT,
URBANIZATION AND CLIMATE CHANGE

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REPUBLIC OF TURKEY
MINISTRY OF TRANSPORT
AND INFRASTRUCTURE

DIRECTORATE GENERAL OF
CIVIL AVIATION
TURKEY

This guideline is prepared under the framework of the Project in coordination with the Directorate General of Civil Aviation - Republic of Turkey Ministry of Transport and Infrastructure.

GUIDELINE FOR MONITORING, REPORTING AND VERIFICATION OF GREENHOUSE GAS EMISSIONS FROM AVIATION ACTIVITIES IN TURKEY

CAPACITY DEVELOPMENT FOR THE IMPLEMENTATION OF A MONITORING, REPORTING AND VERIFICATION (MRV) SYSTEM FOR GREENHOUSE GAS EMISSIONS

GUIDELINE FOR MONITORING, REPORTING AND VERIFICATION OF GREENHOUSE GAS EMISSIONS FROM AVIATION ACTIVITIES IN TURKEY

Impressum

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1 About the Project

This project is based on an agreement between the Republic of Turkey and the Federal Republic of Germany. It is managed by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) within the scope of a Cooperation Agreement. The cooperation partner and beneficiary of the project is the Ministry of Environment and Urbanization (MoEU). Funding is provided by the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) via the International Climate Initiative (ICI).

In partnership with the MoEU, strong regulative legislation has been designed in accordance with the EU regulation, and an MRV system for GHG emissions from the energy and industrial sectors has been established. The core of the studies is the web-based data management system (DMS) enabling the installation operators to submit their monitoring plans and verified annual emission reports directly. Since the start of the project in October 2013, training and seminars have been conducted each year for operators to submit monitoring plans and annual emissions reports. Around 1,000 participants have so far acquired the necessary skills to complete such plans and reports. In addition, several guidance documents and manuals have been produced to provide the operators of industrial installations with guidance in monitoring plans, annual emissions reporting, sectoral calculations, and verification processes. More than 700 installations have submitted monitoring plans and verified annual emissions reports since 2015. However, while developing the MRV Legislation in Turkey, the aviation sector was excluded. Thus, the existing MRV system does not include aviation emissions.

Following the establishment of the MRV system for fixed installations, the project was extended with some additional priorities in September 2018, such as establishing technical and institutional prerequisites for integrating the aviation sector into the MRV system and developing the capacities of the relevant actors, improving data and process quality in the Turkish MRV system towards the EU-ETS standard and taking preparatory steps towards an emission trading or carbon pricing system by developing benchmark options for several relevant sectors.

As per the new component, one focus area is now to establish the MRV system for the aviation sector. Turkish Directorate General of Civil Aviation (DGCA) under the Ministry of Transport and Infrastructure declared its intention to participate and implement the CORSIA provisions in the Bratislava Declaration, dated September 3, 2016. Under this new component, it is intended to establish an MRV system covering emissions from both domestic flights and international flights with the Data Management System (DMS) as its centerpiece. In this context, the DGCA started to develop activities in cooperation with the project. With the cooperation of the DGCA and the DGEM, a four-step approach was followed to establish an MRV system for aviation activities. First, the necessary technical infrastructure for the DMS was studied. The required templates, such as combined monitoring plan, emission report, verification report, offset calculations, emissions unit cancellation reports, were developed to be integrated into the DMS along with a detailed flow chart of the DMS. As the second step, the software of the DMS was designed. Third, a pilot aviation MRV study was conducted with the participation of three volunteered Aeroplane operators and verification bodies. With this study, the DMS was tested with actual emission data, and at the end of the study, it was revised according to the

collected feedback from the aeroplane operators and the verification bodies. The fourth and last step of the component was to develop the capacity of the stakeholders from the sector. This guideline you are reading was written within this scope.

2 Monitoring of Greenhouse Gases in the Aviation Sector

Monitoring, Reporting and Verification schemes represent a critical greenhouse gas emission management tool in establishing a roadmap for the decarbonization policies of countries. Governments need elaborately designed MRV schemes to conduct, on a scientific basis, market-based and result-oriented decarbonization actions, which they will apply particularly in the carbon-intensive industries.

The first step towards monitoring, reporting and verification of greenhouse gas emissions in Turkey was taken by the publication of the "Regulation on Monitoring of Greenhouse Gas Emissions" in the Official Gazette No.29003 and dated 17 May 2014. Following that development, the Capacity Development Project for the Monitoring, Reporting and Verification of Greenhouse Gas Emissions, which target implementation of the MRV of greenhouse emissions from industrial installations that fall under the Categories of Activity listed in the Annex-1 of the Regulation, has been put into effect by GIZ and the Turkish Ministry of Environment and Urbanization. One of the most significant outputs of the project, the Data Management System, has been designed to execute MRV compliance transactions for the emissions caused by installations operating in the branches of industry that are subject to regulation. However, the emissions from industrial installations and the emissions from aviation activities are regulated under two different regulations.[1] The Turkey's Aviation Sector is excluded from the branches of industry that are subject to regulation within the scope of this legislation.

The first disputes towards regulating the greenhouse gas emissions caused by the aviation sector via a carbon pricing mechanism started in 2009 with the facilitation of the ICAO. These disputes matured when ICAO introduced, in 2016, the carbon offsetting mechanism titled CORSIA, which envisages handling and reduction of CO_2 emissions from international civil aviation operations. The standards for implementing CORSIA, the first international decarbonization tool designed for a global branch of the industry within the framework of the fight against the climate crisis, were accepted on 1 January 2019, as an annex of the Chicago Convention, to apply for all 193 member states of the ICAO. Periods like baseline period, pilot phase and the first phase, and second phase have been identified within the scope of CORSIA. A detailed timeline on CORSIA is presented in Figure 1.

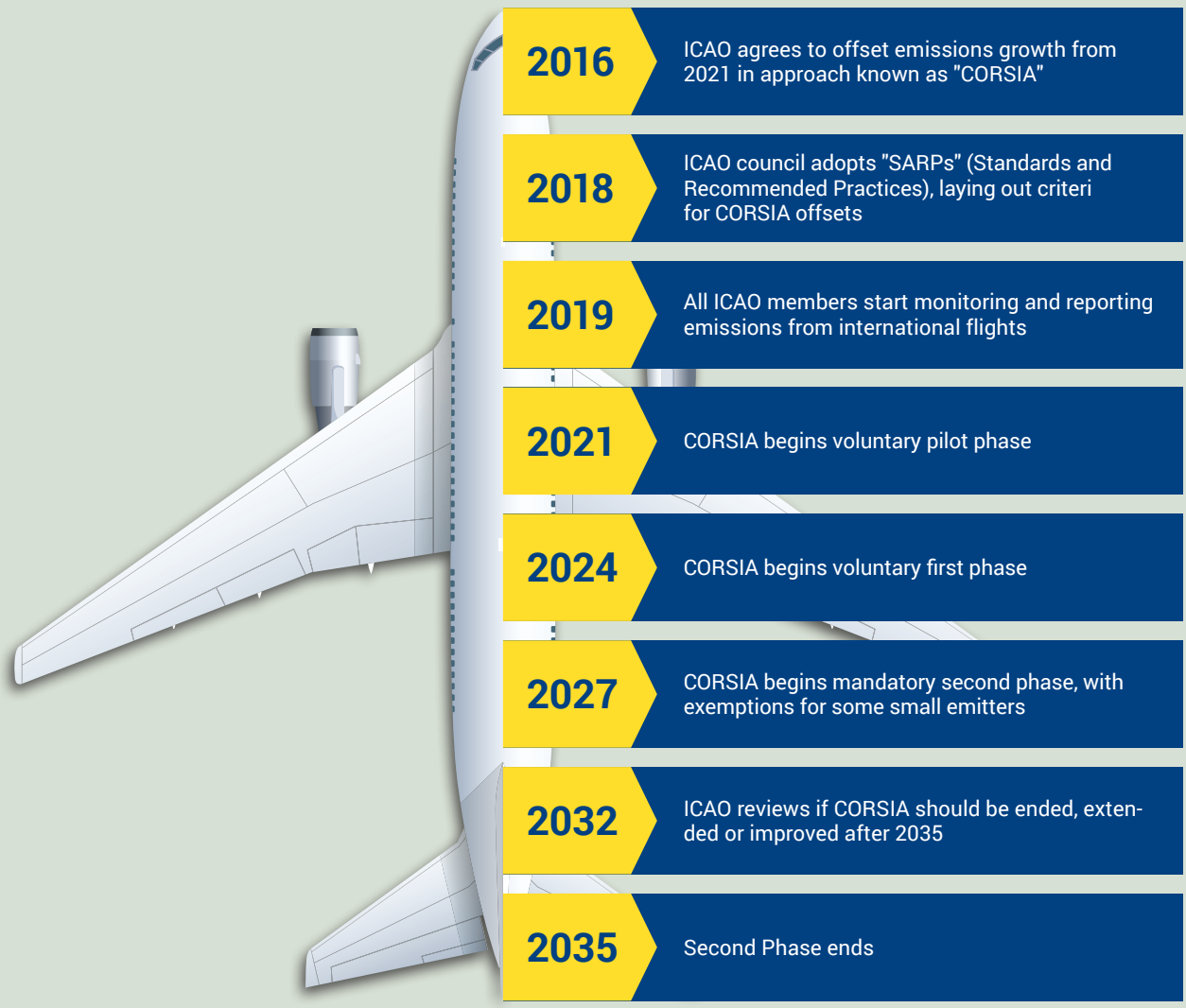
As of 2021, CORSIA aims at stabilizing the emissions from international civil aviation activities at the levels for 2019.

As discussed in Section 1 of the Guideline, the Republic of Turkey - a

1 Greenhouse gas emissions from industrial activities are regulated under the "Regulation on Monitoring of Greenhouse Gas Emissions", whereas greenhouse gas emissions from aviation activities are regulated under the Carbon Offsetting and Reduction Scheme for International Aviation Implementation Order (SHT-CORSIA).

member state of the ICAO - is obliged to regulate, following CORSIA, its emissions resulting from the international flights of aeroplane operators performing international civil aviation operations. In this context, a similar need in other carbon pricing applications effective in different regions around the world will also apply for CORSIA. A market-based decarbonization mechanism to be carried out for emissions from the aviation sector brings along the need for a MRV scheme that will offer a robust inventory for the emissions from that sector. The Directorate General of Civil Aviation under the Ministry of Transport and Infrastructure published an Implementation Order for Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA-SHT) on 8 January 2020. An MRV Data Management System has been designed as part of the Capacity Development Project in Turkey for the Monitoring, Reporting and Verification (MRV) of Greenhouse Gas Emissions, conducted by the DGCA and GIZ, both to enable the implementation of the Order and to fulfill the need for the emission inventory resulting from the aviation operations in Turkey.

Figure 1: CORSIA Timeline[2]



2 https://www.carbonbrief.org/corsia-un-plan-to-offset-growth-in-aviation-emissions-after-2020

3 About the Guideline

This Guideline has been designed to facilitate the use of the Data Management System designed for online performance of the actions under the MRV scheme for the Turkey's Aviation Sector for:

- Aeroplane Operators
- Verification Bodies

The main purpose of the Guideline can be summarized as follows:

- To provide information about design elements and modular business flows
- To provide information about the MRV compliance transactions that can be performed via Data Management System Modules
- To provide information about the technical details that could be useful while using the Data Management System and to previously inform the users about the difficulties, remedies and solutions they could encounter while using the DMS

Additionally, the content of the Guideline has been supported on the procedures and principles regarding compliance with the Turkey's Aviation Sector and CORSIA, which are determined following the SHT-CORSIA Order published by the DGCA. On the other hand, the DMS users are recommended to follow publications other than this Guideline, so that they can complete the MRV and CORSIA compliance procedures precisely.

4 MRV Scheme for the Turkey's Aviation Sector

The Regulation addresses the MRV requirements for the emissions from the civil aviation sector, based on flight type, considering the inventory needs of international flights and domestic flights. These needs dictate that the greenhouse gas inventory setup for domestic flights has been designed as based on CORSIA, only for Monitoring, Reporting and Verification; whereas the inventory setup for international flights has been designed to cover the carbon offsetting requirements, in addition to Monitoring, Reporting and Verification, to fulfill all the obligations of CORSIA. In other words, no offsetting requirement applies for domestic flights, following the scope of CORSIA. Table 1 summarizes the differences and similarities in addressing the domestic flights and international flights under the MRV Scheme for the Turkey's Aviation Sector.

Table 1: MRV Scheme for the Turkey's Aviation Sector: Addressing Domestic Flights and International Flights

Flight Type	International Flights	Domestic Flights
MRV requirement	Yes	Yes
Offsetting requirement obligation	Yes	No
Monitoring Periods		
1st Monitoring Period	01/01/2019 – 31/12/2020	
2nd Monitoring Period	01/01/2021 – 31/12/2023	
3rd Monitoring Period	01/01/2024 – 31/12/2026	
4th Monitoring Period	01/01/2027 – 31/12/2029	
5th Monitoring Period	01/01/2030 – 31/12/2035	
First reporting year	The first emissions reporting under the MRV for the Turkey's Aviation Sector will be prepared for the CO_2 emissions resulting from the aviation activities performed in 2019.[3]	The first emissions reporting under the MRV for the Turkey's Aviation Sector will be prepared for the CO_2 emissions resulting from the aviation activities performed in 2021. Reporting of the emissions that occurred in 2021 is not mandatory, the Aeroplane Operators who want to be included in the reporting must submit their emissions reports to the DGCA by 30 June 2022.[4]
Submission date for the first verification report	31 May 2020 (for the reports on CO_2 emissions that occurred in 2019)	30 April 2023 (for the reports on CO_2 emissions that occurred in 2022)
First transactions for the offsetting requirement	Aeroplane Operates are obliged to retire, by no later than 31 May 2025, the carbon credits they mobilized to offset the emissions that occurred between 2021 and 2023.[5]	Aeroplane Operates registered at the Turkey's Aviation Sector have no obligation of offsetting the CO_2 emissions from domestic flights.

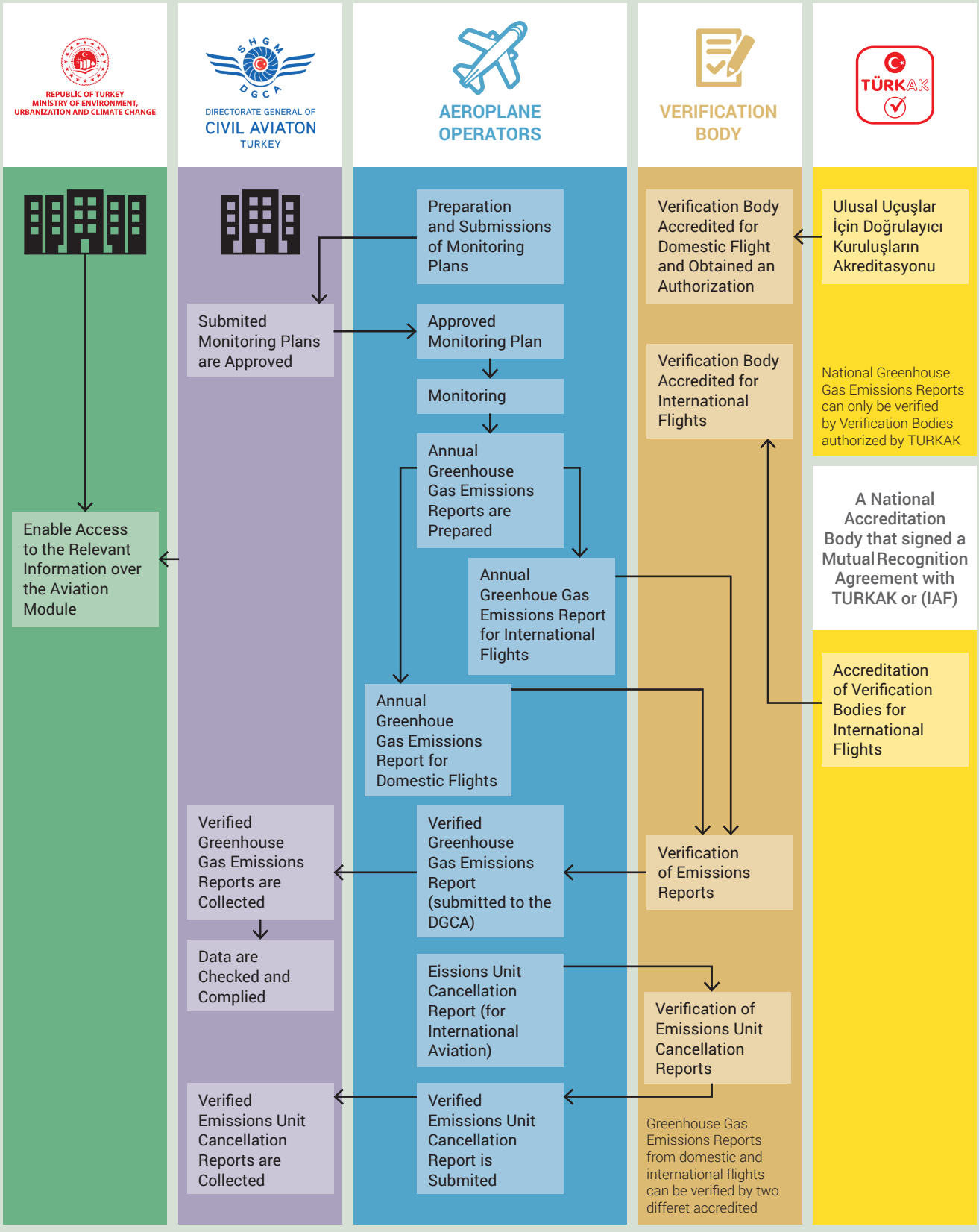
As per the regulation, the acts and actions to be performed within the framework of monitoring the aviation sector emissions will be performed over the electronic system under the Data Management System. Accordingly, aeroplane operators must monitor, report and verify the CO_2 emissions that will be generated by the domestic and international flights by using the Data Management System. Besides, the Emissions Unit Cancellation Reports of flights subject to the offsetting obligations will, again, be prepared over the system, subject to the verification transactions and submitted to the DGCA.

3 Emissions that occurred in 2019 are reported via DMS channel in 2020.

4 Emissions that occurred in 2022 are reported via DMS channel in 2023.

5 An aeroplane operator can also perform its retirement transactions on an annual basis, with reference to the verification of the relevant emissions report. In this context, the reports to be prepared for the carbon credit retirements applied to offset the emissions between 2021 and 2023 must be verified between 1 December 2024 and 30 April 2025.

Figure 2: General Functioning Scheme for the Greenhouse Gas Emissions from Aviation Activities



As seen in Figure 1, all monitoring, reporting, verification and emissions unit cancellation steps are conducted over the Data Management System. The MoEU, DGCA, TURKAK, aeroplane operators and verification bodies are involved in the process of monitoring greenhouse gas emissions.

By referring to the baseline scenario in 2020, carbon-neutral growth is targeted in the international civil aviation sector through technological and operational improvements, sustainable alternative fuels and market-based approaches. In parallel with that target, there is an offsetting requirement for international flights. Through the offset mechanism, airplane operators will offset the volume of CO_2 they cause during a year to the base year (baseline) level, thus contributing to the growth and sustainable development of the aviation industry from 2020 without increasing carbon.

International Flight: means the operation of an aeroplane from take-off at any aerodrome of a State party to the Chicago Convention or its territories, to landing at any aerodrome of another State party to the Chicago Convention or its territories.

Domestic Flight: means the operation of an aeroplane from take-off at any aerodrome in Turkey or its territories, to landing at any aerodrome of Turkey or its territories.

The CO_2 emissions from aeroplanes with a certified maximum take-off weight of 5,700 kg, rented or owned by Aeroplane Operators under the monitoring, reporting and verification scheme for the Turkey's Aviation Sector, will be the focal point of the regulation. The reporting obligations - under MRV - of domestic flights and international flights conducted by Aeroplane Operators by using these aeroplanes have been determined by different thresholds. The MRV Scheme for the Turkey's Aviation Sector prescribes reporting of emissions of 5,000 tCO_2 and higher from domestic flights of an aeroplane operator; and emissions of 10,000 tCO_2 and higher from international flights; and exemption of emissions of Aeroplane Operators that are lower than this annual threshold values. In this sense, the objectives of the MRV for Turkish Aviation are:

1. To coordinate the exemptions based on compliance period, for flights that remain under the threshold values for emission volumes;
2. To create an inventory for CO_2 emissions resulting from the domestic flights and international flights of Aeroplane Operators registered in Turkey's Aviation Sector;
3. To enable the reporting required for the Aeroplane Operators registered in Turkey's Aviation Sector to perform the CORSIA compliance transactions.

In line with the foregoing objectives, the documents required to be prepared for compliance with the MRV, as stated in the Order, are listed as follows:

- **MRV Exemption Certificate:** The Aeroplane Operators estimating that the emissions they will cause during a compliance period will be below the threshold values determined according to the flight types will apply for exemption from the MRV via the Compliance Periods Module. Once such application is approved by the DGCA, an MRV Exemption Certificate issued as bearing the signature of DGCA for the relevant compliance period will be made available for access by the relevant user, over the DMS.

- **Monitoring Plan:** It is the document where Aeroplane Operators declare their monitoring methods to be followed in the Emissions Report they will prepare within the scope of MRV compliance. A Monitoring Plan is prepared for each compliance period and its validity is subject to the approval of the DGCA.
- **Emissions Report:** It is the report by which Aeroplane Operators document, on an annual basis, the emission inventory they prepare for their flights (see: domestic flights and international flights) that are not exempt from the MRV. Validity of the Emissions Report is subject to the approval of the Verification Body and the DGCA.
- **Emissions Unit Cancellation Report:** It is the report where Aeroplane Operators clarify the details (i.e., credit volume, credit details etc.) of the carbon offsetting transactions they perform within the scope of their CORSIA compliance obligations.
- **Verification Report:** These are the reports in which Verification Bodies check whether the information provided in the ER and EBIR documents are compatible with the Monitoring Report previously prepared by the relevant aeroplane operator and approved by the DGCA, and the validity of data, and present their opinions. Validity of the Verification Report is subject to the approval of the DGCA.

Aeroplane Operators must prepare the relevant documentation by using the online software of the Data Management System to fulfill their MRV obligations in line with the above-listed objectives.

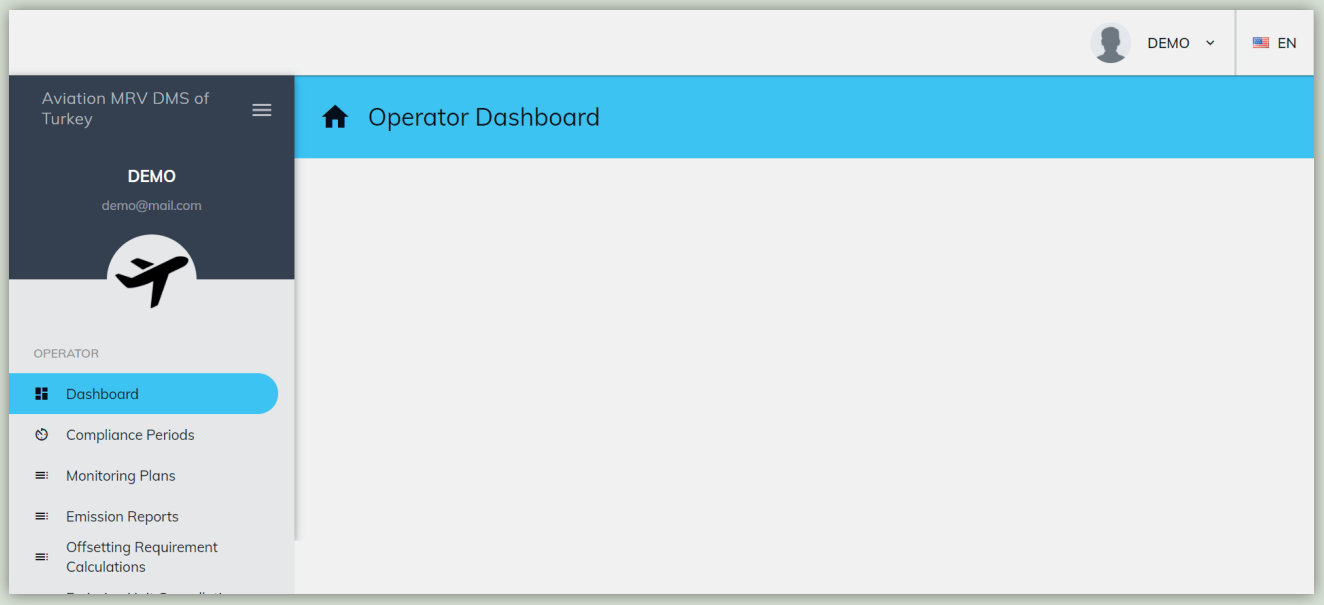
5 Design of the Data Management System

5.1 User Profile

User profile of the Data Management System, by means of which the MRV compliance transactions of the Turkey's Aviation Sector, consist of the followings:

- **Admin Account:** The user account is open for access by the DGCA, the competent authority responsible for the execution of the MRV scheme developed for the Turkey's Aviation Sector. The DGCA checks, confirms and rejects the data and reporting entered by the relevant flights for compliance with the MRV.
- **Admin Account (Read-Only):** This Admin account allocated to the Ministry of Environment and Urbanization has been designed to enable the Ministry to instantly view and monitor the actions carried out under the MRV scheme developed for the Turkey's Aviation Sector. Only viewing and monitoring actions can be carried out on this account.
- **Aeroplane Operator Account:** The user account through which Aeroplane Operators perform the exemption or reporting actions for compliance with the MRV.
- **Verification Body Account:** The user account through which the MRV documents subject to verification following the content of the Order are made available for access by the Verification Bodies.

Figure 3: Login Screen – Dashboard (Aeroplane Operator) and DMS Modules



5.2 Design of the DMS Modules

Following the contents of the Annex of the Chicago Convention referring to CORSIA and the Order published by the DGCA, the aviation companies to be subject to MRV regulation are obliged to provide information or report by using the Data Management System for emissions from the flights they are exempt from and the flights they are responsible for. In this context, the Aeroplane Operators must share the needful over the DGCA and DMS system, the information required for the flights (see: domestic flights and international flights) which they believe to be exempt from the MRV during the relevant CORSIA compliance period, and have their MRV exemptions approved; must complete the data entries on the relevant DMS modules to make the necessary reporting for the flights they are not exempt from and have the entered data approved by the Verification Bodies and the DGCA.

Users of the Data Management System can perform actions on the following points:

- Applications for MRV Exemption by Aeroplane Operators (for domestic flights and international flights)
- Preparation of monitoring plan, emissions report, offsetting requirement report and emission unit cancellation report documents by Aeroplane Operators
- Preparation of the verification reports for emissions reports and emissions unit cancellation reports by the Verification Bodies
- Uploading of supporting documents for the prepared documents (in zip format)
- Presenting opinions regarding the data entered and the documents prepared by the DGCA
- Preparation of CCR that include the total international emissions of Turkey to be conveyed by the DGCA to the ICAO

DMS consists of 5 basic modules; “Compliance Periods Module, Monitoring Plans Module, Emissions Reports Module, Offsetting Requirement Calculations Module, Emissions Unit Cancellation Module and Verification

Module". Upon logging in to the DMS with user information, Aeroplane Operators carry out the MRV compliance transactions by using 5 of these modules listed on the dashboard (Figure 3). The Verification Module is made available for access by the Verification Body, after the relevant Verification Body is assigned by the Aeroplane Operator.

5.3. DMS Organization Charts

The Data Management System has different organization charts for Domestic Flights and International Flights. The main difference between these organization charts is that no offsetting requirement has been assigned, under CORSIA and, therefore, the Regulation, to the emissions from Domestic Flights. In other words, functions of offsetting requirement calculation and offsetting reporting for Domestic Flights in MRV compliance procedures carried out under the DMS are not available.

Organization charts of the DMS, which are designed by Domestic Flights and International Flights, are demonstrated in Figure 4 and Figure 5.

Figure 4: Organization Chart – Emissions from Domestic Flights

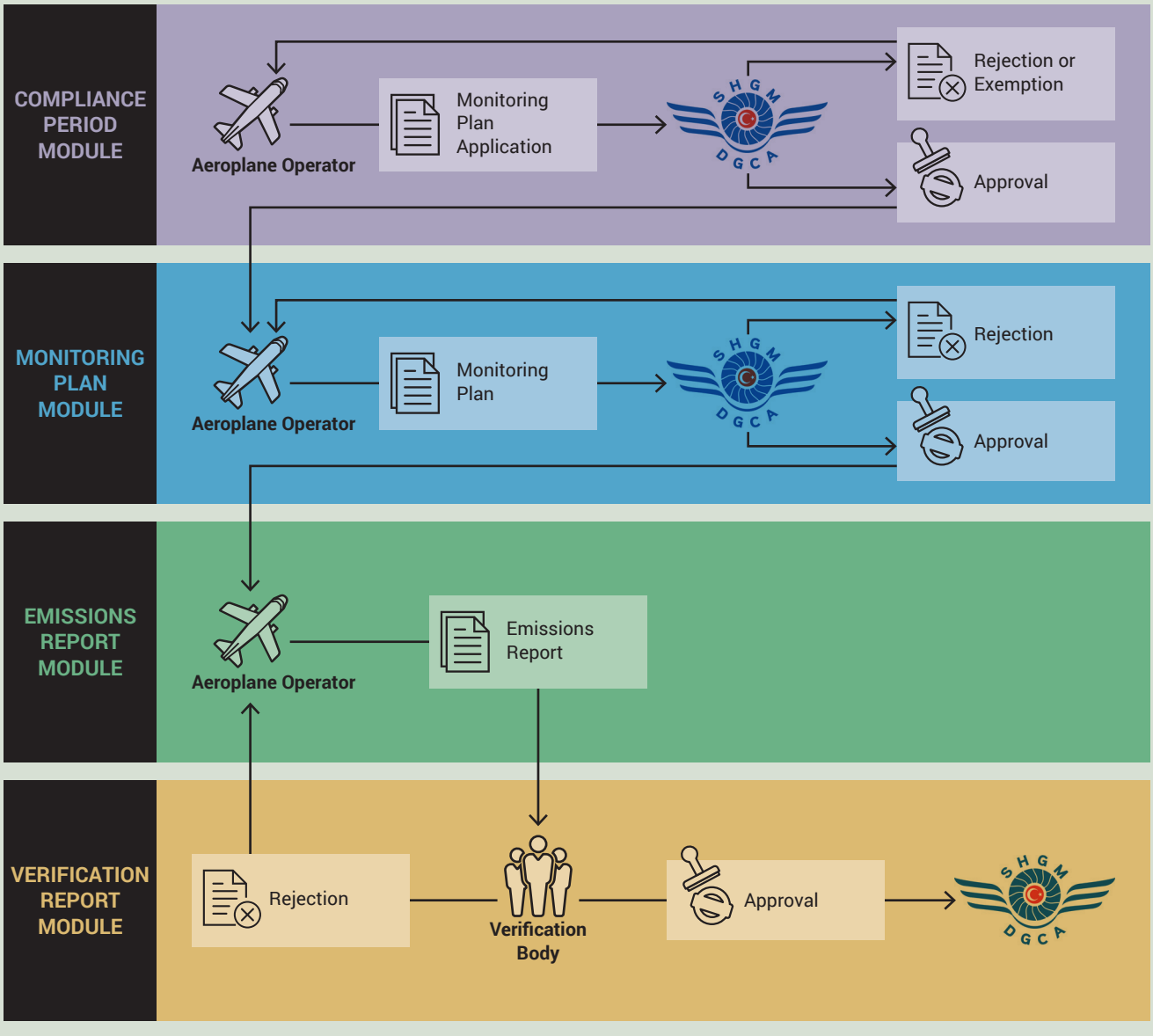
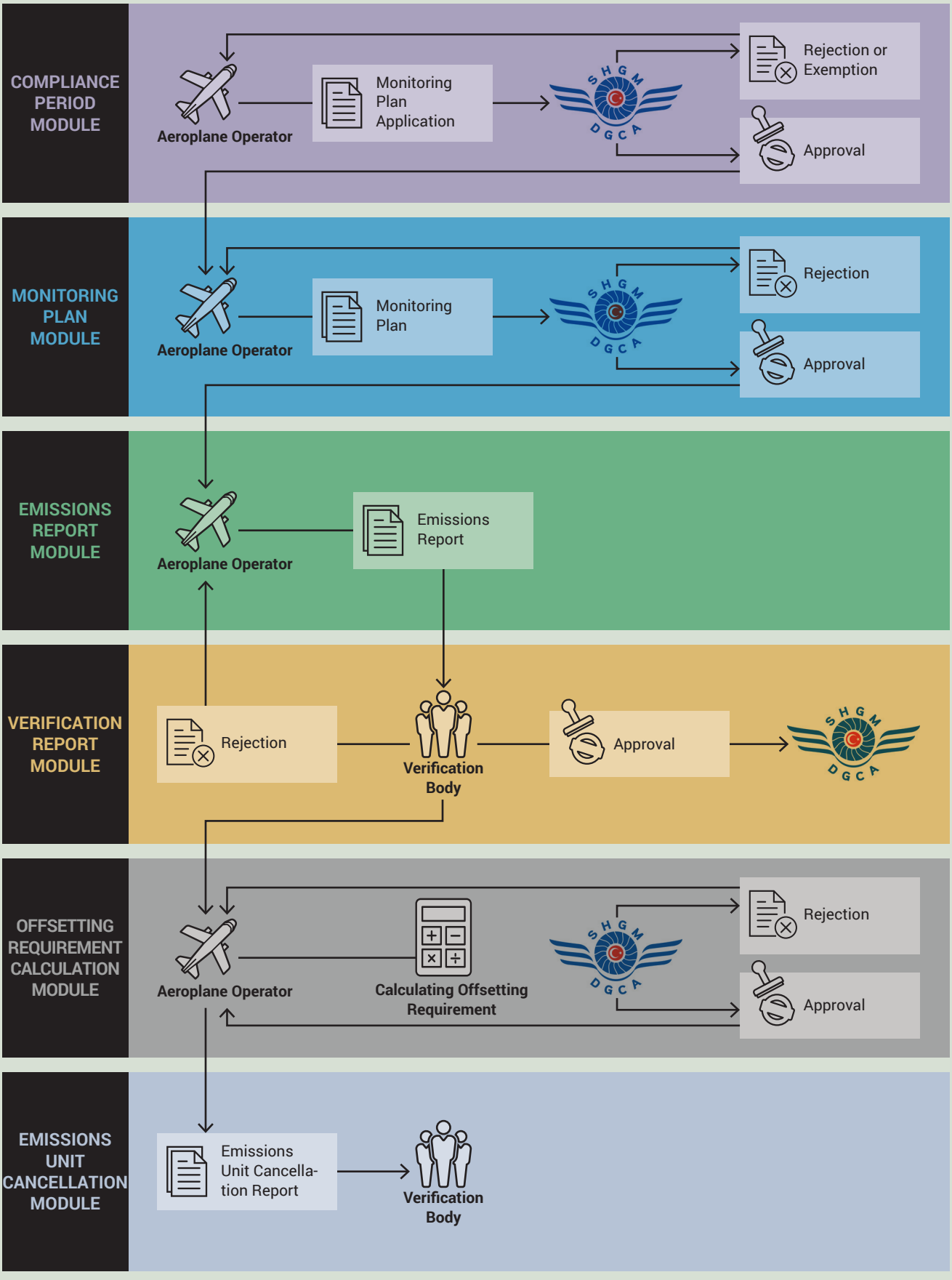


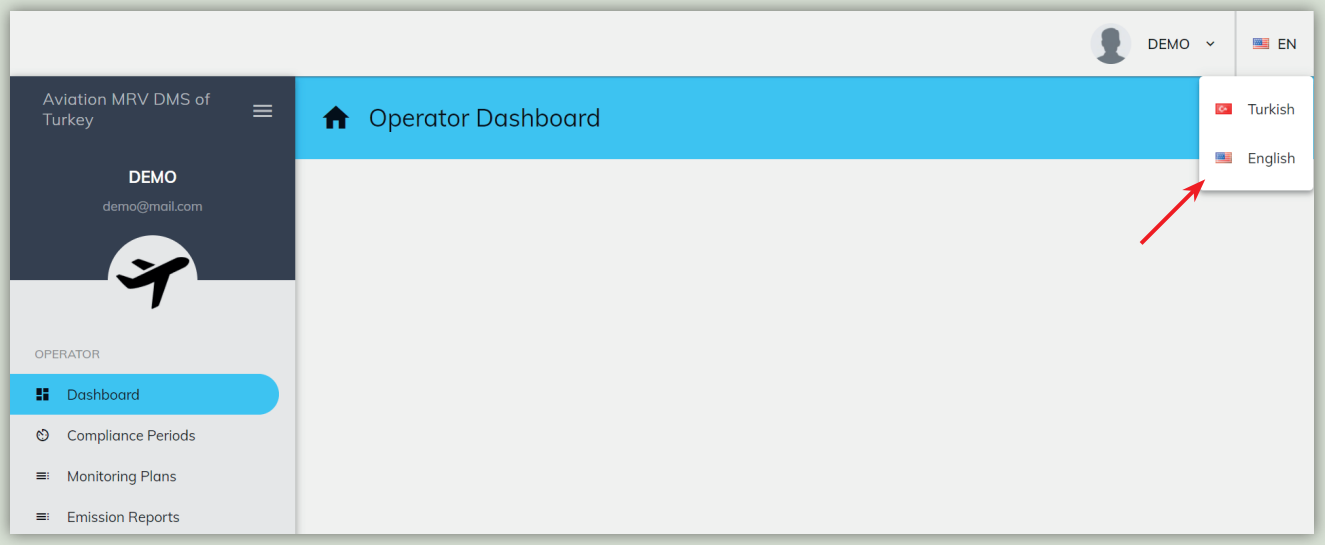
Figure 5: Organization Chart – Emissions from International Flights



5.4 Bilingual Structure of the DMS

The Data Management System enables data entry and reporting in two different languages, English and Turkish, for Aeroplane Operators. Users can instantly change the reporting and data entry language by clicking on the country flag signs on the top right corner of the DMS (Figure 6).

Figure 6: Language Panel of the DMS



The DMS has been designed to allow Monitoring Plans to be prepared in both Turkish and English in the same report. On the other hand, there are some points to be considered while selecting the preparation language of the Emissions Reports. Aeroplane Operators can only work with local Verification Bodies in verifying the reporting of emissions from domestic flights, as dictated by the Order. In this context, the DMS has been developed to allow preparation of the emissions reports for such flights in Turkish only. All other reporting for the emissions resulting from international flights can be completed in either English or Turkish.

6 Business Flows in the DMS Modules

The Order provides for different requirements for reporting and data entries as part of the MRV exemption actions and the MRV compliance transactions for the emissions from domestic flights and international flights. In this sense, the business flows that form the background of the MRV compliance transactions to be performed under the DMS vary for domestic flights and international flights.

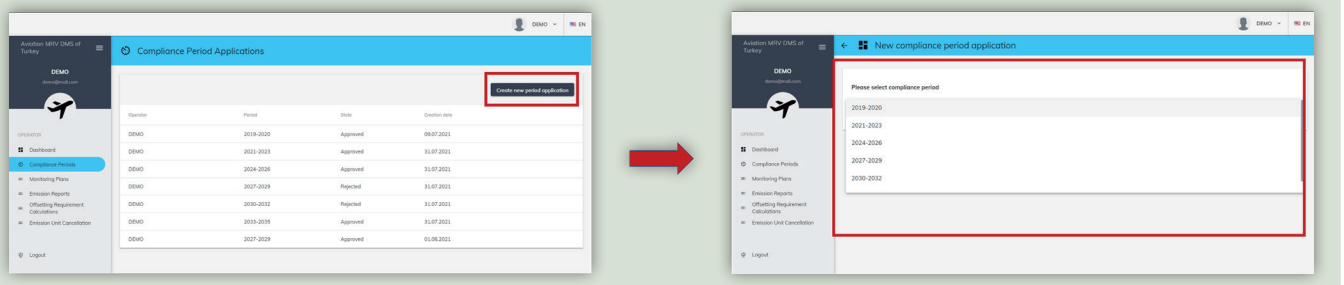
6.1 Compliance Periods Module

Aeroplane Operators can perform the following actions over the Compliance Periods Module:

- Applying for MRV exemption
- Selecting a Monitoring Plan
- Checking the current states of applications submitted for the opinion of the DGCA

The first step shall be taken by Aeroplane Operators in the MRV compliance transactions is to select the relevant Compliance Period for data entry or reporting. Users should start the MRV compliance transactions by selecting one of the compliance periods from the tab that will open by clicking on the “Create a New Compliance Period” button, as seen in Figure 7, determined in parallel with the CORSIA compliance periods in the Order..

Figure 7: Creating a New Compliance Period Application



6.1.1 Domestic Flights Actions

The hierarchy for the MRV compliance transactions (data entries) to be performed in the Compliance Periods Module has been designed to allow data entry for Domestic Flights first and International Flights after.

After selecting the Compliance Period, Aeroplane Operators are directed to the MRV Exemption query for the Domestic Flights of the relevant period. There are two scenarios that make the Aeroplane Operators exempt from the MRV:

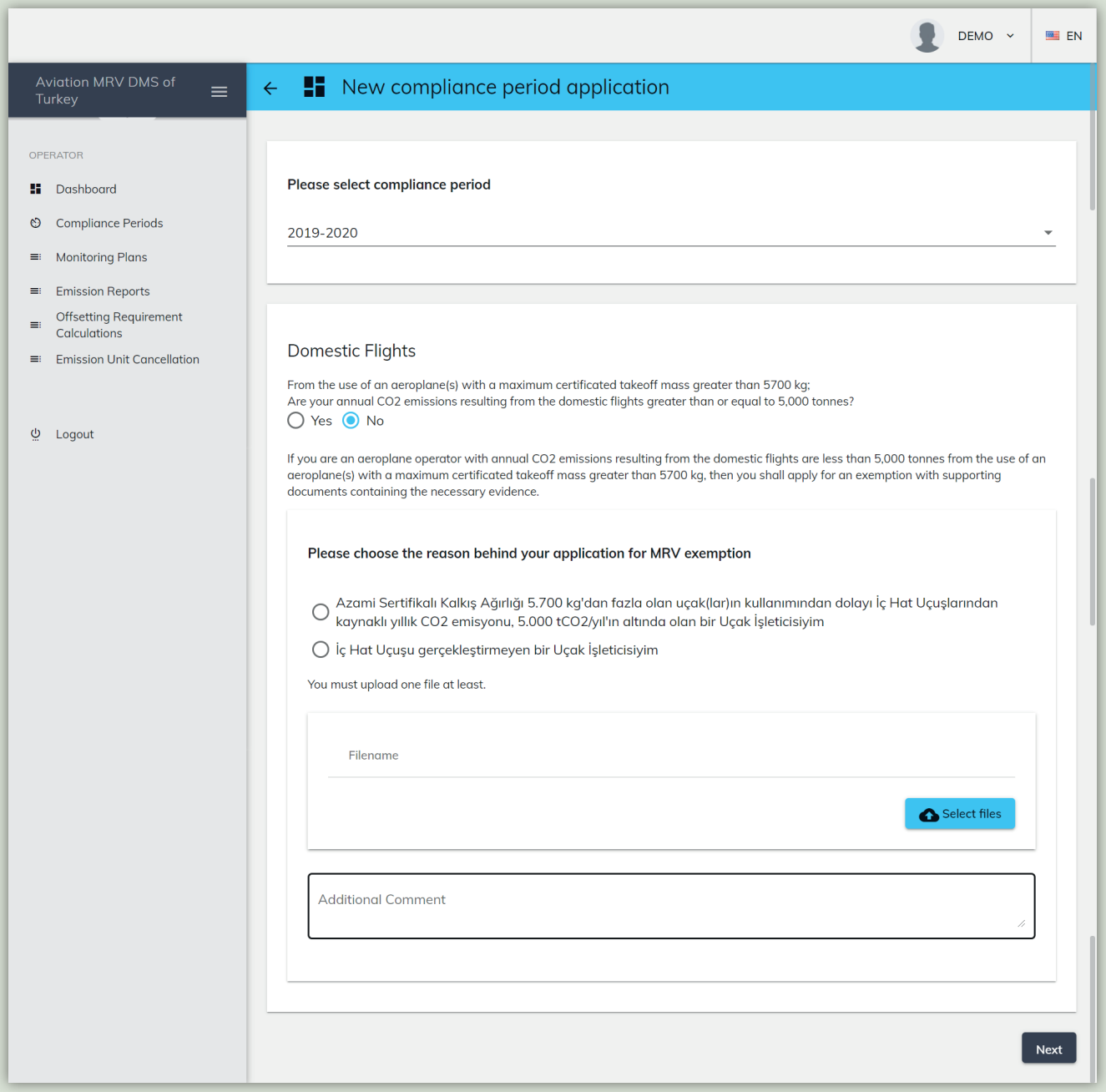
1. Not exceeding the emission threshold: Aeroplane Operators that calculate, with a CERT tool, the estimated emissions caused by domestic

flights during a compliance period to be below 5,000 tCO_2 will be exempt from the MRV for that compliance period.

2. Not operating any domestic flights

The Aeroplane Operators that answer the question of "Are your annual CO_2 emissions resulting from the domestic flights greater than or equal to 5,000 tonnes?" - shown in Figure 8 - as "No" should select a reason of exemption. Any user who selects an option saying the user did not exceed the threshold must upload the CERT document used for calculations and other potential supporting documents to that calculation. On the other hand, any user who selects an option saying the user did not perform any domestic flights must upload a signed declaration to the system, indicating that the user did not perform Domestic Flights.

Figure 8: Selecting the Reason behind MRV Exemption



Users who will not demand MRV exemption under the Compliance Period application should answer the question of "Are your annual CO_2 emissions resulting from the domestic flights greater than or equal to 5,000 tonnes?" as "Yes". Users who give that answer for Domestic Flights must apply for Domestic Flights by selecting one of the 5 Fuel Use Monitoring Method (Figure 9). In other words, Domestic Flights can only be reported by selecting one of the 5 Fuel Use Monitoring Method on the MRV Scheme for the Turkey's Aviation Sector.

Figure 9: Selecting the monitoring method for Domestic Flights

6.1.2 International Flight Transactions

After selecting the Compliance Period, Aeroplane Operators are directed to the MRV Exemption query for the International Flights of the relevant period. There are two scenarios that make the Aeroplane Operators exempt from the MRV:

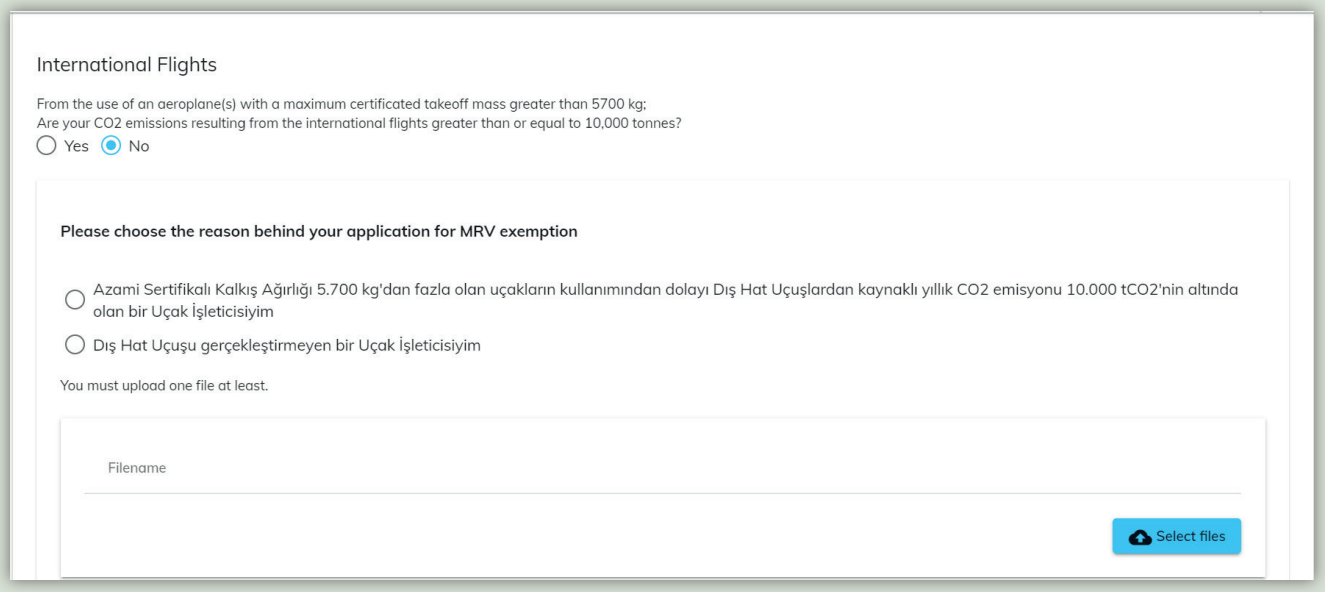
1. Not exceeding the emission threshold: Aeroplane Operators that calculate, with a CERT tool, the estimated emissions to be caused by international flights during a compliance period as below 10,000 tCO_2 will be exempt from the MRV for that compliance period.
2. Not operating any international flights

The Aeroplane Operators that answer the question of "Are your annual CO_2 emissions from International Flights equal to 10,000 tons or higher?" - shown in Figure 8 - as "No" should select a reason of exemption. Any user who selects an option saying the user did not exceed the threshold must upload the CERT document used for calculations and other potential supporting documents to that calculation. On the other hand, any user who selects an option saying the user did not perform any international flights must upload a signed declaration to the system, indicating that the user did not perform International Flights.

On the other hand, users who answer the question of "Are your CO_2 emissions resulting from the international flights greater than or equal to 10,000 tonnes?" as "Yes" are obliged to answer a number of new questions and

As provided for in the Order, the emissions from flights subject to offsetting requirement must be monitored by using one of the 5 Fuel Use Monitoring Method.

Figure 10: Selecting the monitoring method for International Flights



make new selections in line with those answers. Accordingly, as shown in Figure 11, the first question to be answered by the user is, "Are your CO_2 emissions resulting from the international flights greater than or equal to 50,000 tonnes?"

Users who answer the question as "Yes" must select the same method they previously selected from the options for 5 Fuel Use Monitoring Method to monitor Domestic Flights, in case of flights subject to offsetting requirement, as provided for in the Order. In other words, the DMS automatically makes this selection for the users.[7]

Users who answer the question as "No" have two different options for monitoring the emissions from the relevant International Flights:

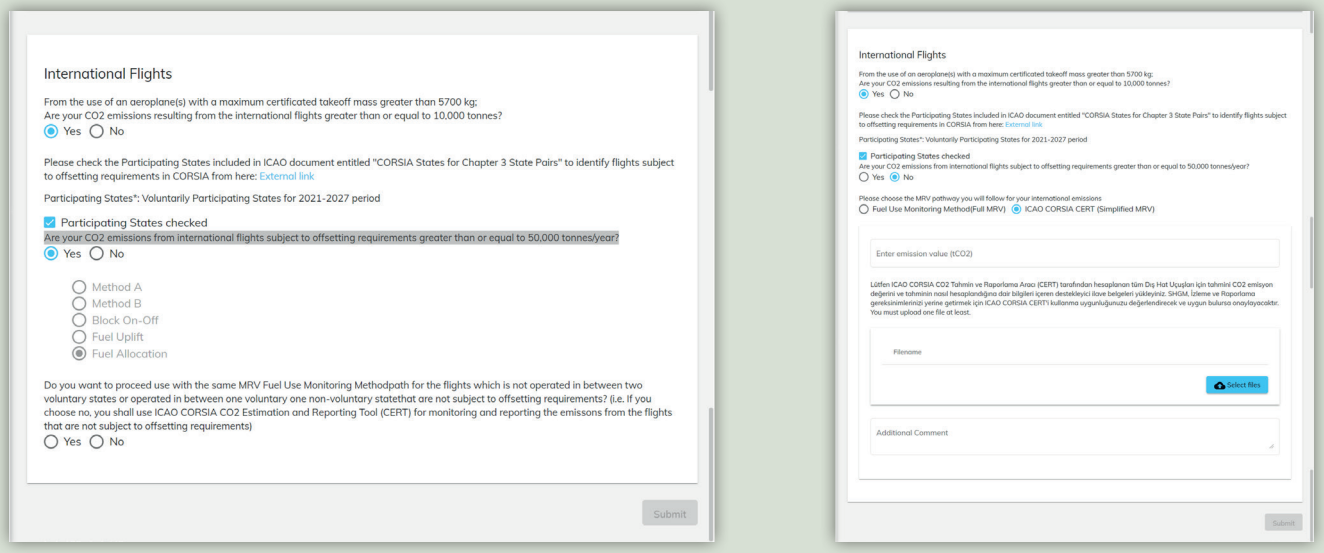
1. **Fuel Use Monitoring Method:** Users must select the same method they previously selected from the options for 5 Fuel Use Monitoring Method to monitor Domestic Flights. Following that selection (automatic or manual), the user is obliged to answer the question of "Do you want to proceed use with the same MRV Fuel Use Monitoring Method path for the flights which is not operated in between two voluntary states or operated in between one voluntary one non-voluntary state that are not subject to offsetting requirements?" Users who answer this question

7 Users who apply for exemption for Domestic Flights select at this stage, for the first time, one of the 5 Fuel Use Monitoring Methods to be used for monitoring the flights subject to offsetting requirement.

as “Yes” will report their emissions with 5 Fuel Use Monitoring Method, whereas those who answer the question as “No” will use the ICAO CORSIA CO_2 Estimation and Reporting Tool (CERT).[8]

1. **ICAO CORSIA CERT (Simplified MRV):** Users must enter the estimated emission value and upload the CERT Excel file that contains the calculations indicating that value (Figure 11).

Figure 11: CORSIA offsetting requirement question

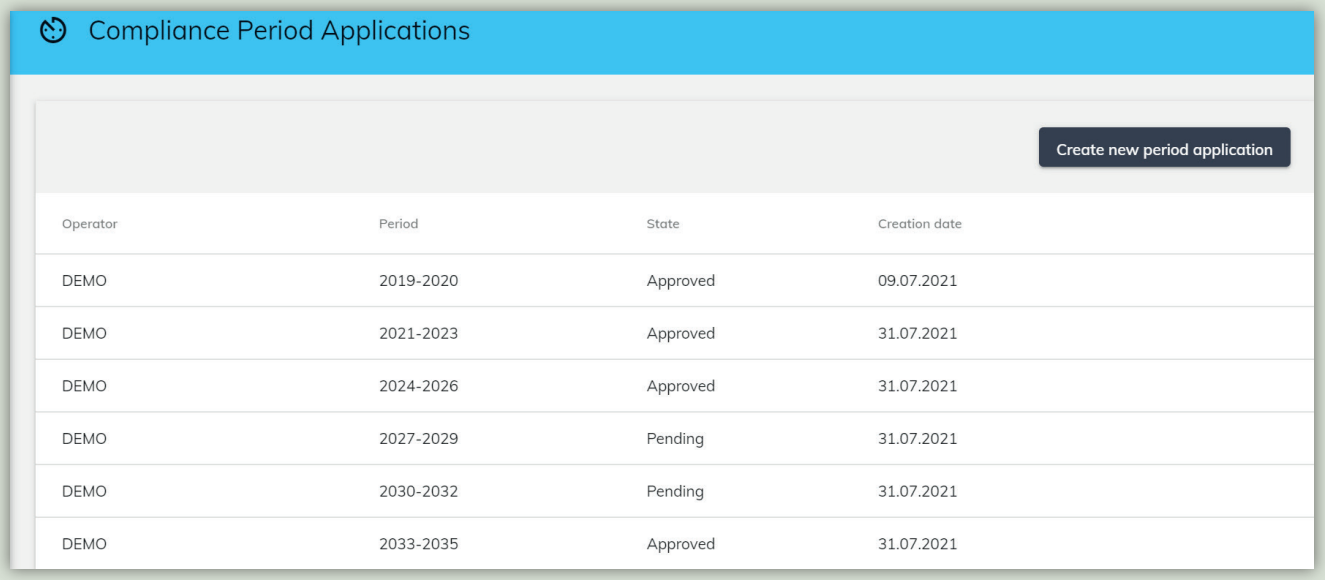


8 Users who apply for exemption for Domestic Flights select at this stage, for the first time, one of the 5 Fuel Use Monitoring Methods to be used for monitoring the flights subject to offsetting requirement.

6.1.3 Compliance Period Application Control

Aeroplane Operators that complete the MRV compliance transactions on the Compliance Period Module and make the Compliance Period Application to the DGCA can check the current status of their applications from the list of “Compliance Period Applications” (Figure 12) available on the home page of the Module.

Figure 12: List of Compliance Period Applications



The applications created under the Compliance Periods Module can have 3 Statuses:

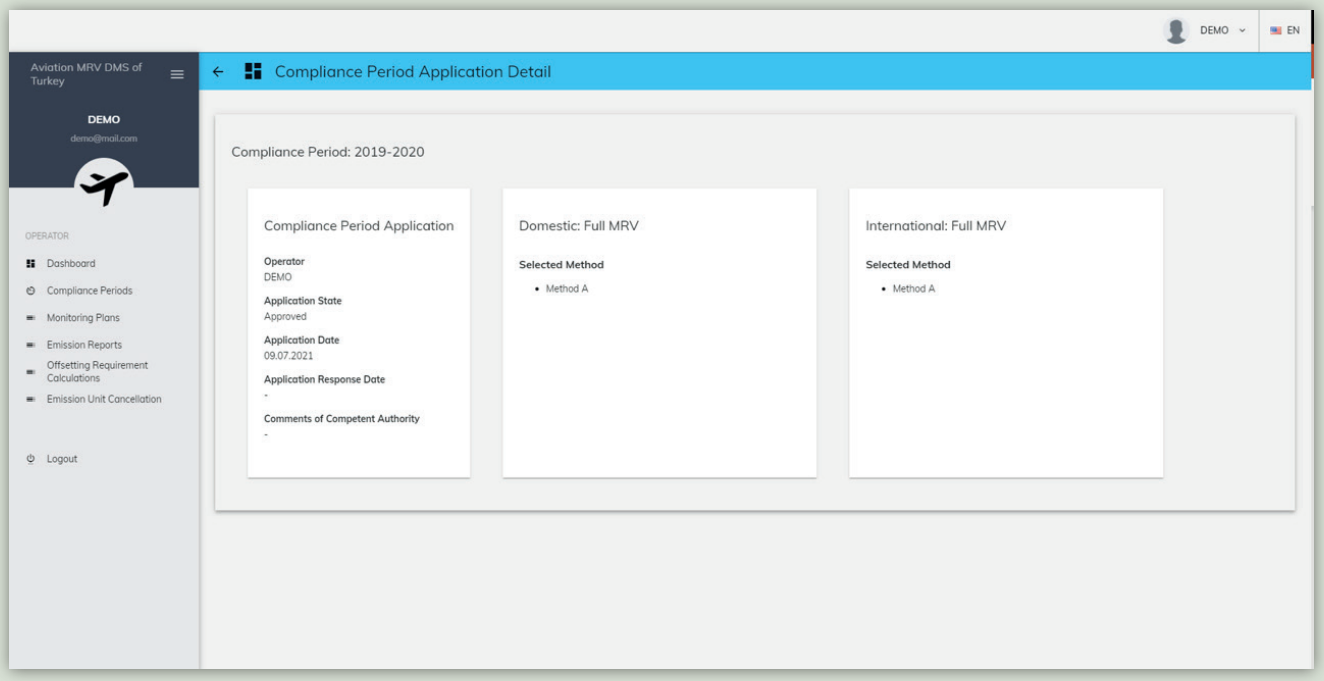
1. Approved
2. Rejected
3. Pending

If a created application is not subject to the approval of the DGCA, it directly appears as “Approved” on the list. On the other hand, applications subject to the approval of the DGCA will remain as “Pending” until the application is approved by the DGCA or rejected (see: “Status” column).

Aeroplane Operators will be directed to the Compliance Period Application Details screen when their listed applications are clicked on. Compliance Period Application Details screen (Figure 13) include the following basic information:

- Application Result
- Date of Application
- Reply date to the application (if replied)
- Comments of the DGCA (if commented)
- Monitoring Method subject to application (by flight type - Domestic and International)

Figure 13: 13. Compliance Period Application Detail screen



6.2 Monitoring Plans Module

Aeroplane Operators can perform the following actions over the Monitoring Plans Module:

- Creating a Monitoring Plan
- Submitting the created Monitoring Plans to the opinion of the DGCA
- Organizing the Monitoring Plans submitted to the opinion of the DGCA

This module consists of the 6 main sections listed below:

1. Information On Monitoring Plan
2. Identification Of Aeroplane Operator and Description of Activities
3. Fleet and Operations Data
4. Methods and Means for Calculating Emissions
5. Data Management
6. Submission

Users can start preparing a Monitoring Plan for each Compliance Period, for which an application was created previously, by clicking on the “Add New” button on the home page of the Module (Figure 14).

Users can perform the following actions from the control panel on the top right of the Module screen (Figure 15):

- Instant recording of data entries (see: red arrow)
- Transition between sections (see: green arrow)
- Opening of the section panel (see: brown arrow)

Figure 14: Adding a New Monitoring Plan

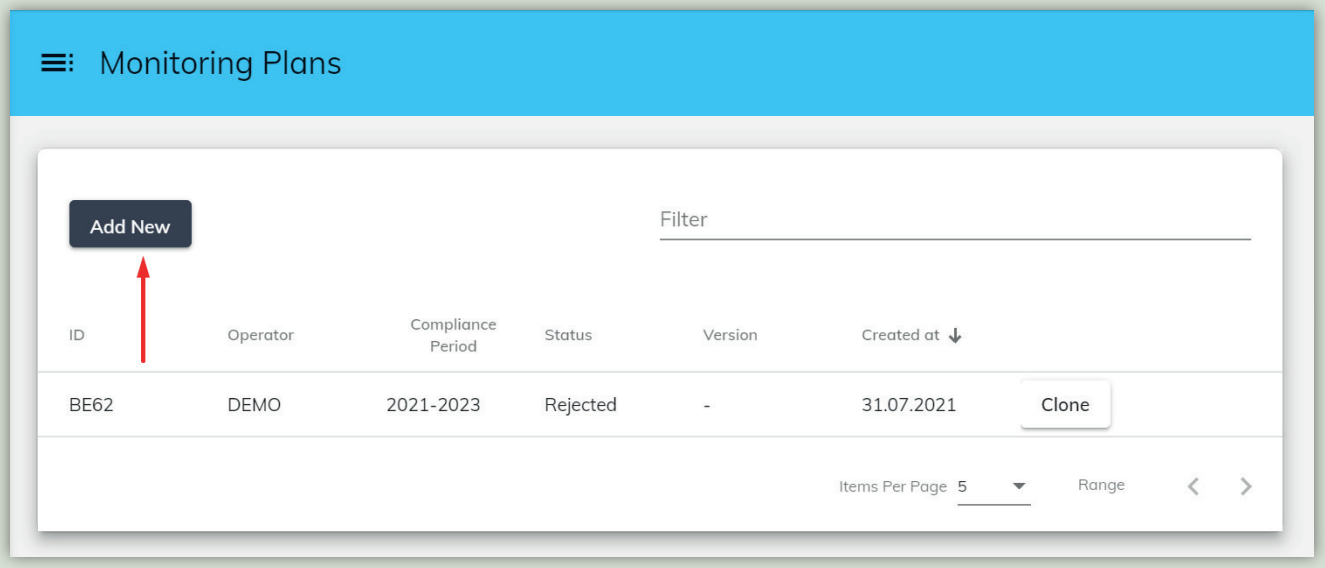
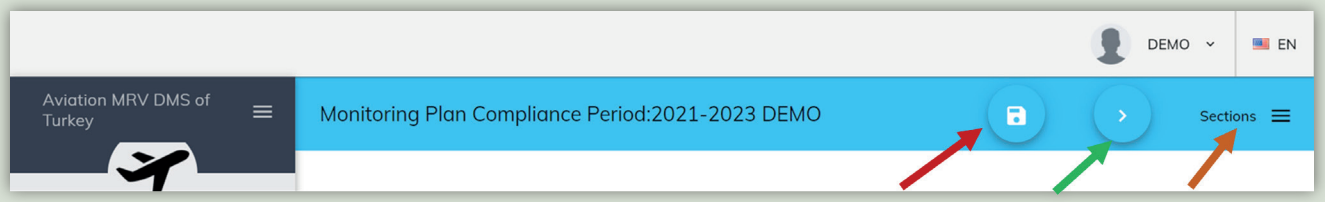


Figure 15: Monitoring Plans Module Dashboard

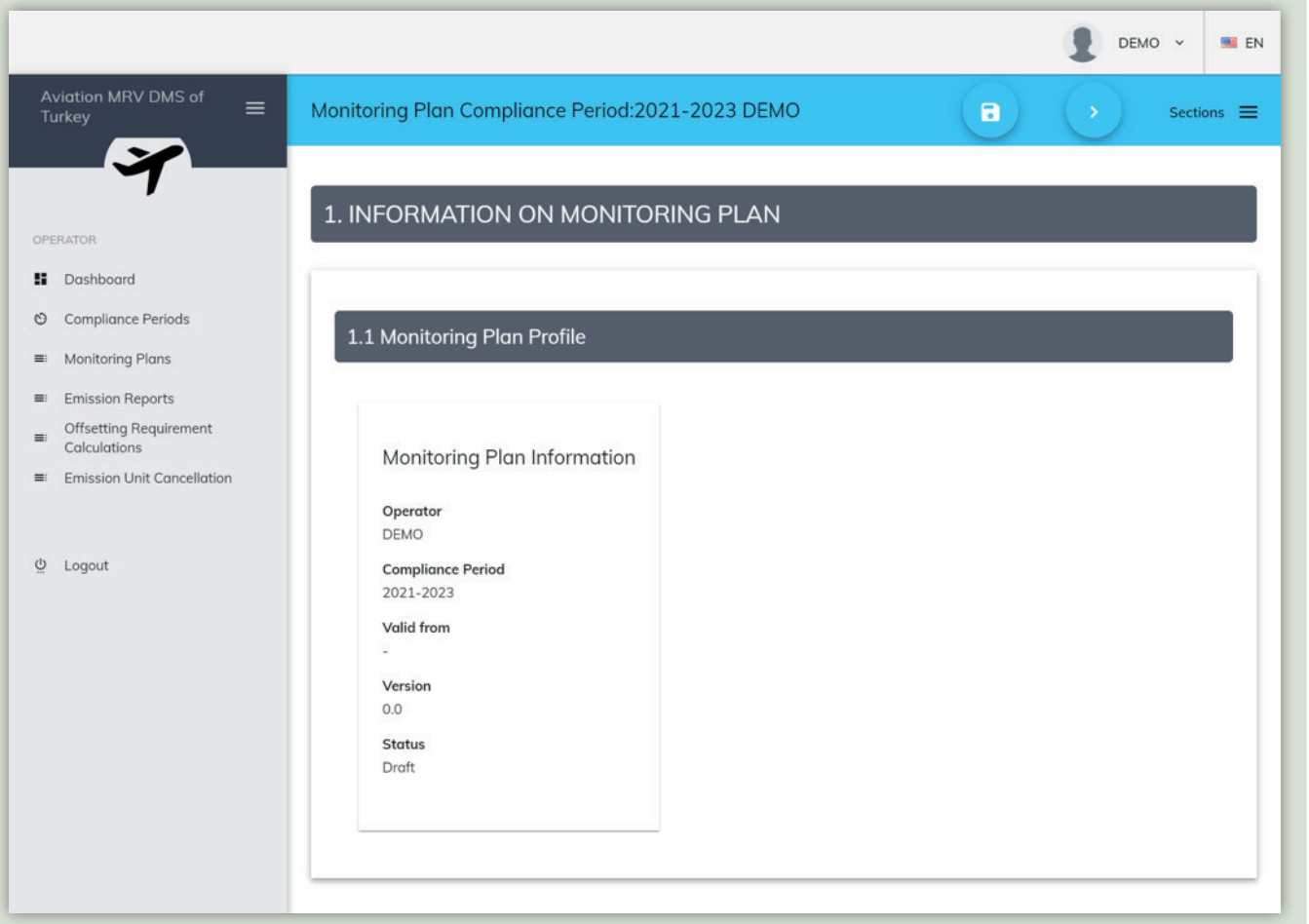


6.2.1 Information On Monitoring Plan

Users can access the following basic information over the Section on Information about the Monitoring Plan (Figure 16):

- Compliance Period for which a Monitoring Plan has been created
- Validity Date of the Monitoring Plan
- Version number of the Monitoring Plan
- Status of the Monitoring Plan

Figure 16: Section on the Monitoring Plan Information



The applications created under the Monitoring Plans Module can have 4 Statuses:

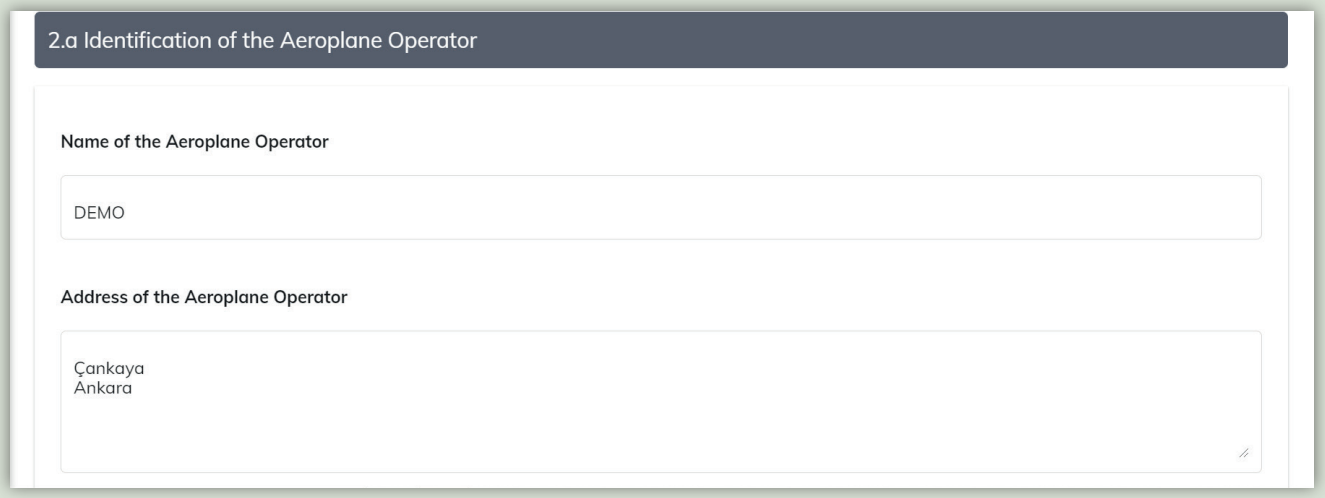
1. Draft
2. Approved
3. Rejected
4. Pending

An application in the process of creation appears as “Draft”. Applications submitted to the approval of the DGCA will remain as “Pending” until the application is approved by the DGCA or rejected.

6.2.2 Identification Of Aeroplane Operator and Description of Activities

In this section, Aeroplane Operators enter some data regarding corporate information and aviation activities. Data are entered manually for each Monitoring Plan created outside of section 2-a. Basic identity details in section 2-a are automatically drawn from the Corporate Registration Module of the Data Management System (Figure 16).

Figure 17: Section 2-a of the Monitoring Plans Module

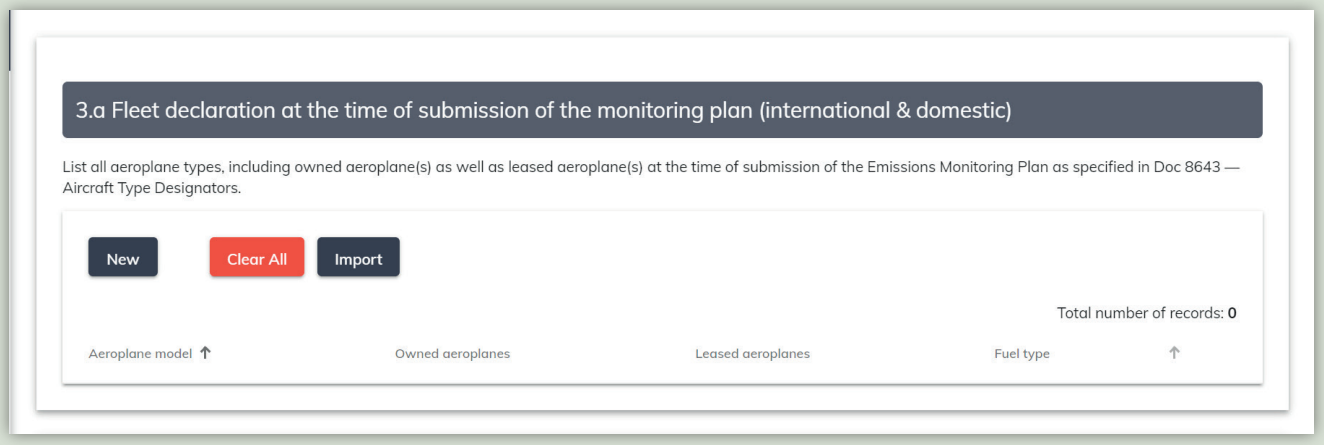


6.2.3 Fleet and Operations Data

In this section, data about the aeroplanes registered at the Aeroplane Operator's fleet and the aviation operations carried out are entered. Data entries to sub-sections except for the sub-sections 3.1, 3.a1 and 3.e1 are based on an "open-ended" or "short text" responding system:

3.a Fleet declaration during the Monitoring Plan (domestic and international): In this subsection, Users should enter all aeroplane types available at the time of submission of the Emissions Monitoring Plan, specified under the Doc 8643-Aeroplane Type Designators, including the owned aeroplanes as well as the rented ones (Figure 17).

Figure 18: Fleet declaration at the time of submission of the 3.a Monitoring Plan (domestic and international)



Data can be entered in two ways in this sub-section (Figure 18):

Users click on the "*New*" button and fill in, according to the aeroplane types, the form that appears.

Users click on the "*Import*" button and upload to the system an Excel file that includes the aeroplane types.

Users can click on the "*Clear All*" button to erase the data entered by filling in the form or uploading an Excel file.

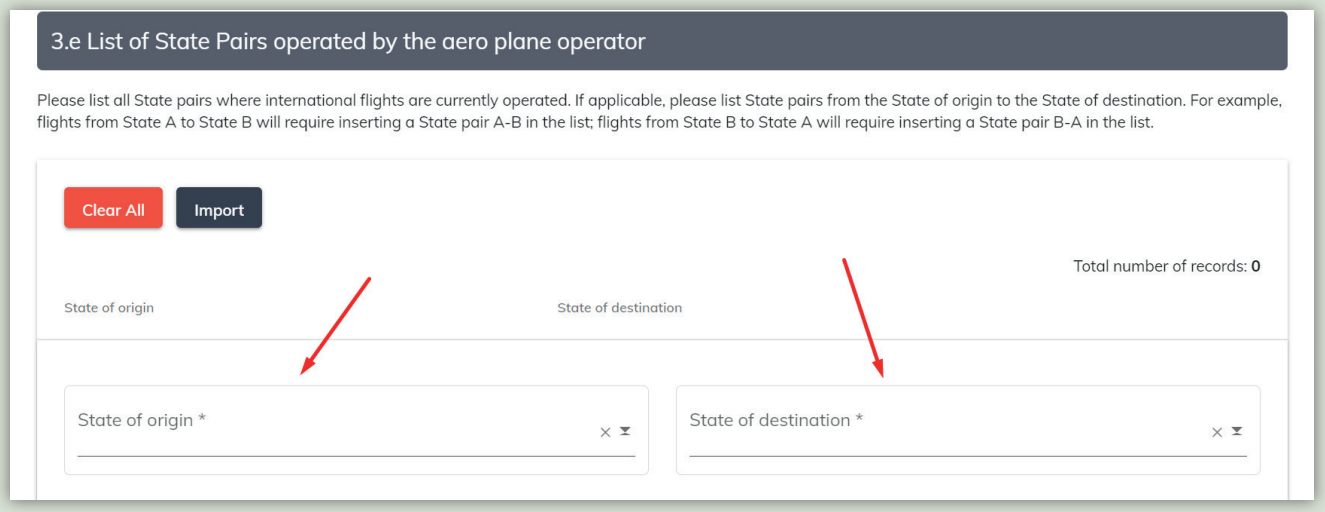
3.a1 Additional aeroplane type to be included in the fleet: In this sub-section, users should report the new aeroplane types they are planning to include in their fleets later (if they are planning) in the Monitoring Plan they create, during the period when the Monitoring Plan is valid. The buttons used while entering data in this sub-section and the new windows to open are similar to the ones in section 3.a (Figure 18).

3.e List of State pairs where the Aeroplane Operator operates: This sub-section is visible only to Users who do not apply for exemption for International Flights during the Compliance Period Application. In this context, the obligated Users should specify all State pairs where International Flights are already made. In doing that, they should enter the State pairs data as from the Departure State to the Arrival State. In this sub-section, data can be entered in two ways (Figure 19):

Users add the data on departure and arrival states by selecting from the relevant drop-down menu.

Users upload an Excel file that includes the departure and arrival state data to the system, by clicking on the "*Import*" button.

Figure 19: 3.e List of State pairs operated by the Aeroplane Operator



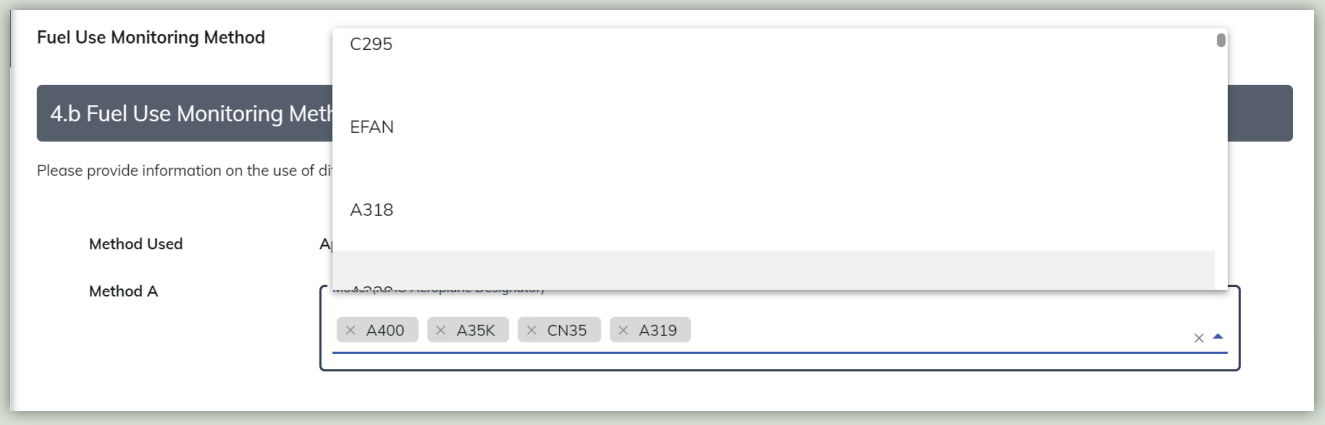
If Users are going to enter more than 50 State pairs, they must attach such data as a separate document to the Emissions Monitoring Plan. For instance, flights from State A to State B should be indicated as A-B State pair on the list; flights from State B to State A, on the other hand, should be indicated as B-A State pair.

6.2.4 Methods and Means for Calculating Emission

In this section, data on the methods and tools used by the Aeroplane Operator in emission calculations are entered. Data entries to sub-sections except for the sub-section "4.b" are based on an "open-ended", "multiple-choice" or "short text" responding system:

4.b Fuel Use Monitoring Methods: In this section, Users enter data that apply to every sub-fleet (according to the ICAO aeroplane type designator) and data on the use of the monitoring method they select during the Compliance Period Application. Users should enter all the ICAO Aeroplane Designator types by selecting from this sub-section (Figure 20).

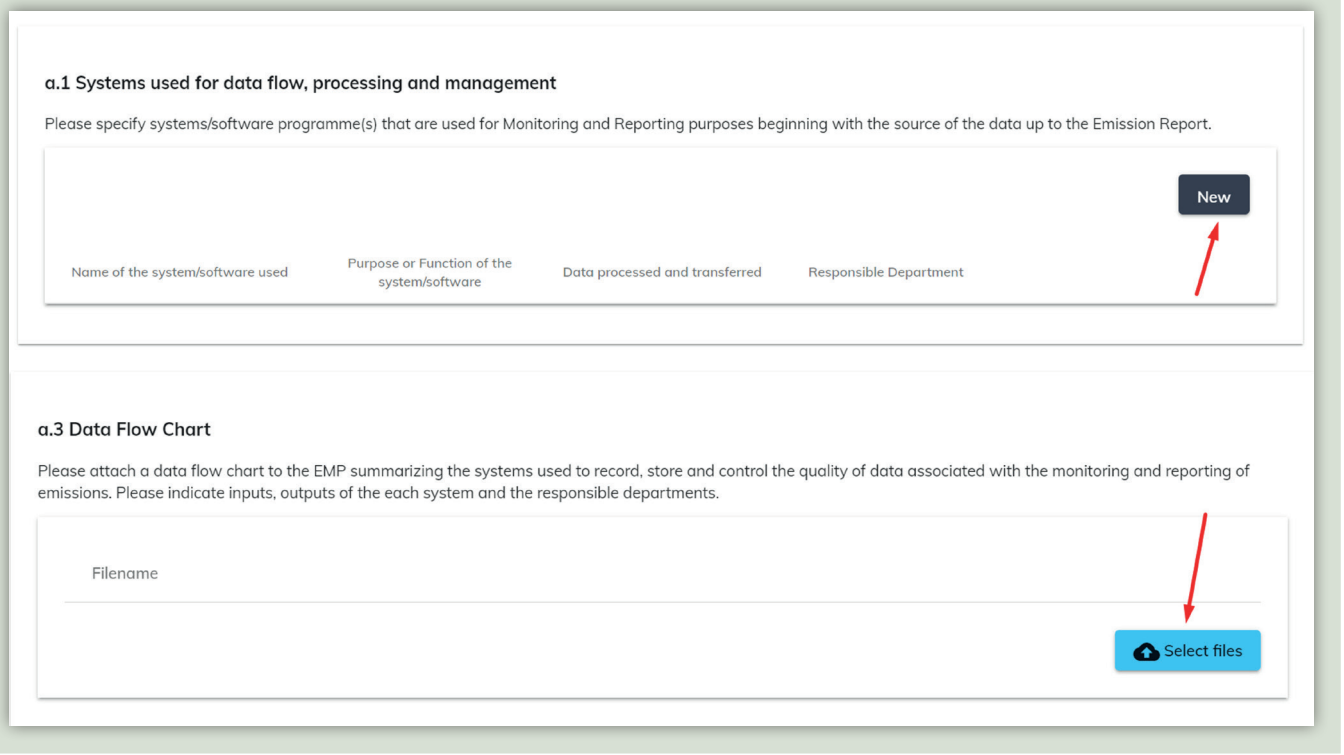
Figure 20: 4.b Fuel Use Monitoring Methods



6.2.5 Data Management

In this section, potential data regarding the tools, principles and methods used in-company by the Aeroplane Operator for the tracking and management of emissions are entered. In this section, data entries are built on the "open-ended" responding system and on entering "open-ended" data and uploading "document" through the new windows that will open by clicking on the "New" and "Choose File", as in the case of sub-sections "a1" and "a3" (Figure 21):

Figure 21: Section 5 – Data Management



6.2.6 Submission

In this section, the Monitoring Plan created with the data entered by the Aeroplane Operator until reaching this section is officially submitted to the opinion of the DGCA.

To submit the monitoring plan, Users should first create an output for the Monitoring Plan in PDF format, by clicking on the "Generate a PDF File" button in sub-section 6.2 (Figure 22). The information of "Date of Validity" asked to be selected must be the same date when the most up-to-date version of the Monitoring Plan is submitted online.

Figure 22: Generating the Monitoring Report PDF file

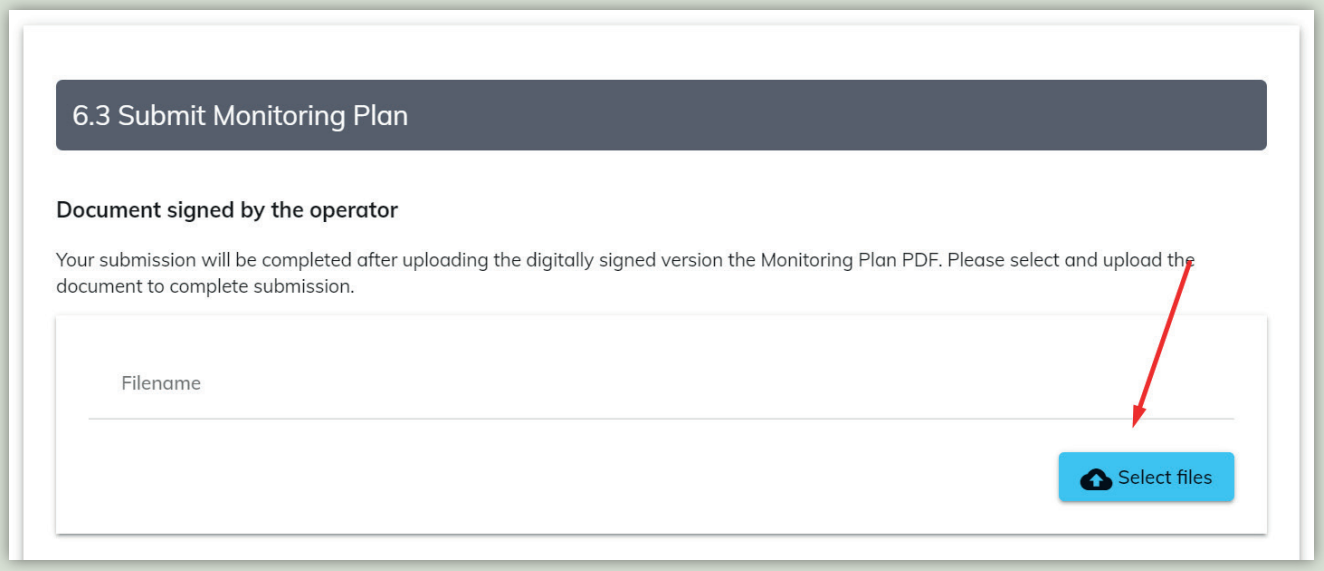
After the relevant file (PDF) is generated, some information available in the Monitoring Plan and defined as *"Immaterial Change"* can be edited without the need for any approval/rejection procedure, whereas some other information defined as *"Material Change"* cannot be edited **without the approval of the DGCA.** The sections where there are no Material and Immaterial Changes are listed below:

If edited, sections that cause Material Change: 2a / 2d1 / 2d2 / 3a2 / 3b / 3c / 3d / 3f / 3f1 / 3g / 3h / 4 (all) / 5.1 (all) / 5.2 (all) / 5.3 (all)

If edited, sections that cause Immaterial Change: 2b / 2c / 2c1 / 2d / 2e / 3a1 / 3b / 3e / 5.4 (all) / 5.5 (all)

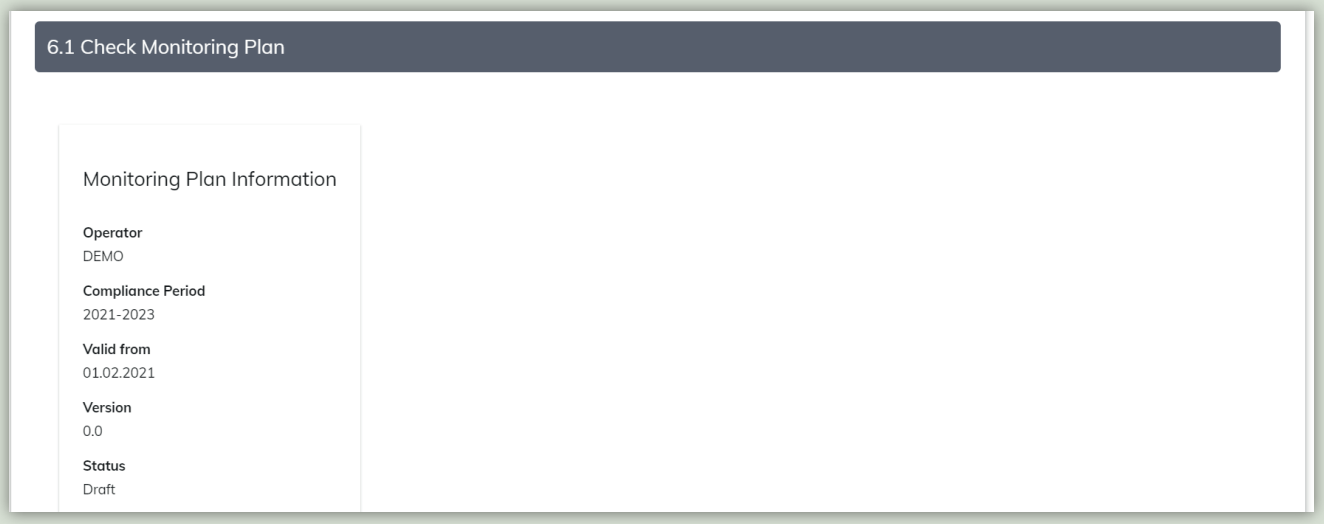
In the next step, the Aeroplane Operator is obliged to sign digitally and upload the PDF file to the system. When this action is completed, the Monitoring Plan is submitted to the DGCA and the submitting procedure is completed (Figure 23).

Figure 23: Submitting the Monitoring Plan



Additionally, Users can view in this section the basic information on the Monitoring Plan submitted, such as “Compliance Period, Date of Validity, Version” (Figure 21).

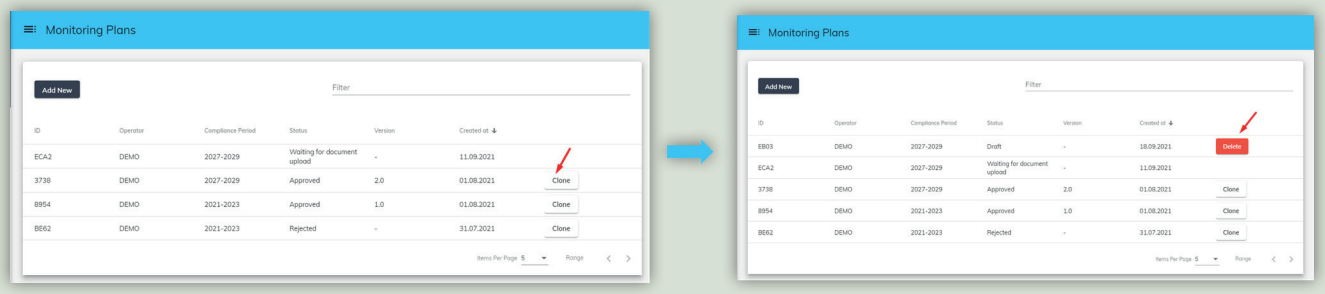
Figure 24: Checking the Monitoring Plan



6.2.7 Checking the Monitoring Plan

MRV compliance transactions can be completed in the Monitoring Plans Module and the Aeroplane Operators that submit the Monitoring Plan to the DGCA can check the current status of their applications from the list “Monitoring Plans” available on the home page of the Module. Aeroplane Operators whose Monitoring Plans are rejected can view the reasons behind the rejection of their applications by clicking on the relevant line on the list shown in Figure 16.

Figure 25: Editing the Monitoring Plan



Aeroplane Operators should later click on the “Clone” button on the far right of the relevant line of the list, to edit the application in the light of the relevant reasons. They should create an editable copy of the application rejected by the DGCA for the Edited Monitoring Plan application and re-submit the revised file on which the necessary changes are applied over the copy to the opinion of the DGCA (Figure 25). The changes to be applied on the copy and the phases to be followed while sending the revised file will be similar to the phases followed while creating a new Monitoring Plan.

6.3 Emissions Reports Module

Aeroplane Operators can perform the following actions over the Emissions Reports Module:

- Creating an Emissions Report
- Assigning a Verification Body
- Submitting the created Emissions Report to the opinion of the Verification Body and the DGCA
- Editing the Emissions Reports submitted to the opinion of the Verification Body and the DGCA

This module consists of the 8 main sections listed below:

1. Aeroplane Operator Identification and Description Of Activities
2. Underlying Basic Information of The Emissions Report
3. Aeroplane Fleet and Fuel Types
4. Fuel Density Input
5. Reporting Aerodrome Pairs
6. Data Gaps
7. Verification Body
8. Submisson

Users can start producing an Emissions Report for a Monitoring Plan, which was previously approved by the DGCA, by clicking on the “Add New” button on the home page of the Module (Figure 26). The relevant Compliance Period should be selected on the window that opens after clicking on this button (Figure 27).

Figure 26: Adding a new Emissions Report

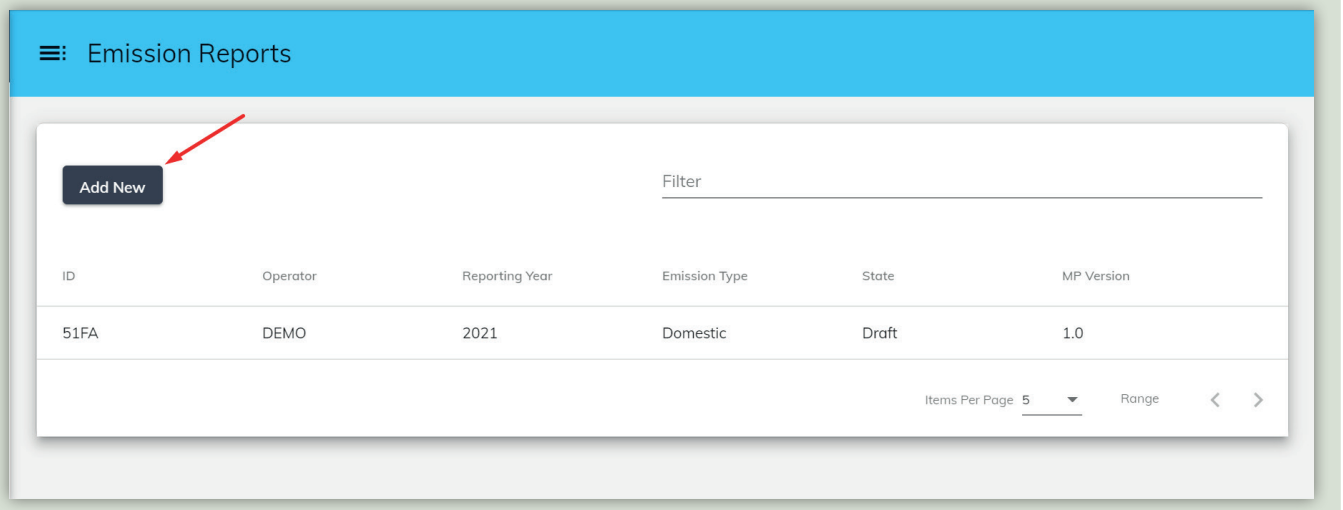
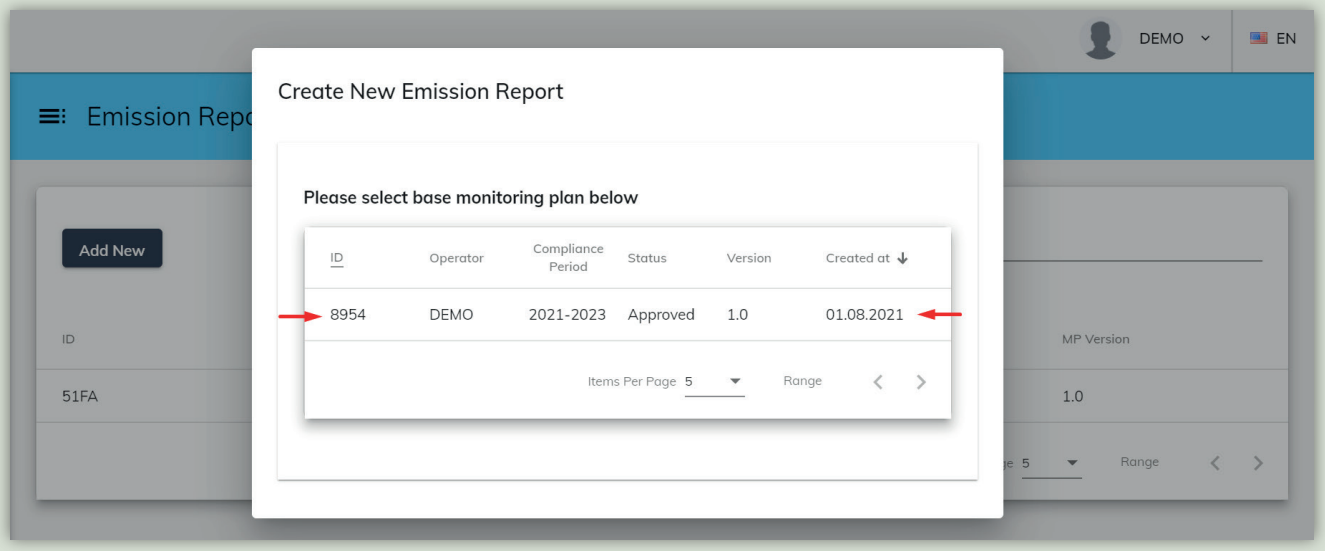
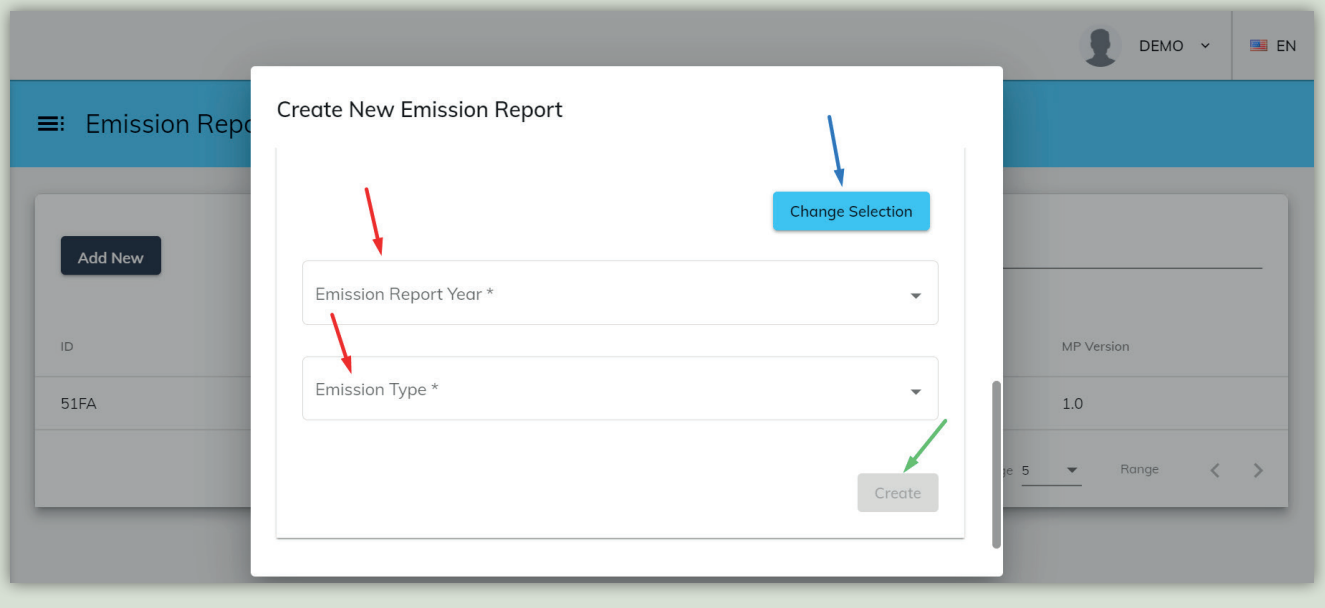


Figure 27: Adding a new Emissions Report – Selecting a Compliance Period



After selecting the Compliance Period, users should select the year for which the emissions will be reported[9], on the new window that opens, and the flight type to be reported for that year[10], before clicking on the "Create" button. Users can also go back to the Compliance Period selection page by clicking on the "Change selection" button (Figure 28).

Figure 28: Adding a new Emissions Report – Selecting the Reporting Year

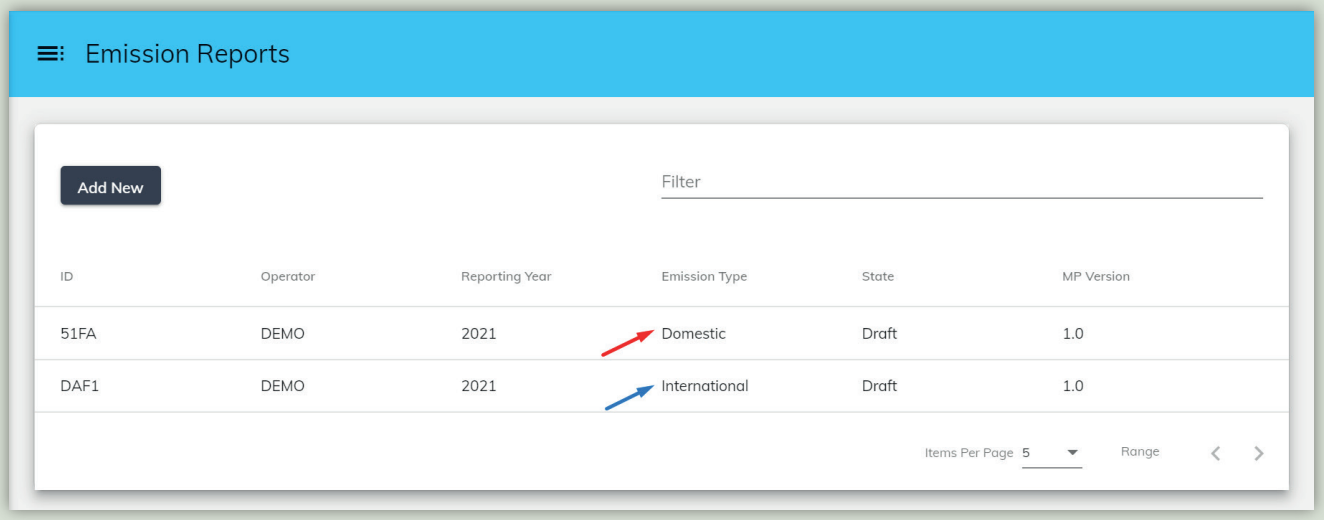


9 As provided for in the Order, Emissions Reports are prepared on an annual basis and on flight-type basis under the MRV Scheme for the Turkish Aviation Sector.

10 The flight types an Aeroplane Operator is exempt from during a Compliance Period Application do not appear in that window.

Once the Aeroplane Operator creates an Emissions Report draft for Domestic and International Flights for a specific year within the relevant compliance period, that draft flight is listed together with the other Emissions Reports created for different flight types with different circumstances on the home page of the Section on Emissions Reporting (Figure 29). Creation of the Emissions Report starts by clicking on the line of the relevant draft on that list.

Figure 29: Home page of the Section on Emissions Reports



6.3.1 Aeroplane Operator Identification and Description of Activities

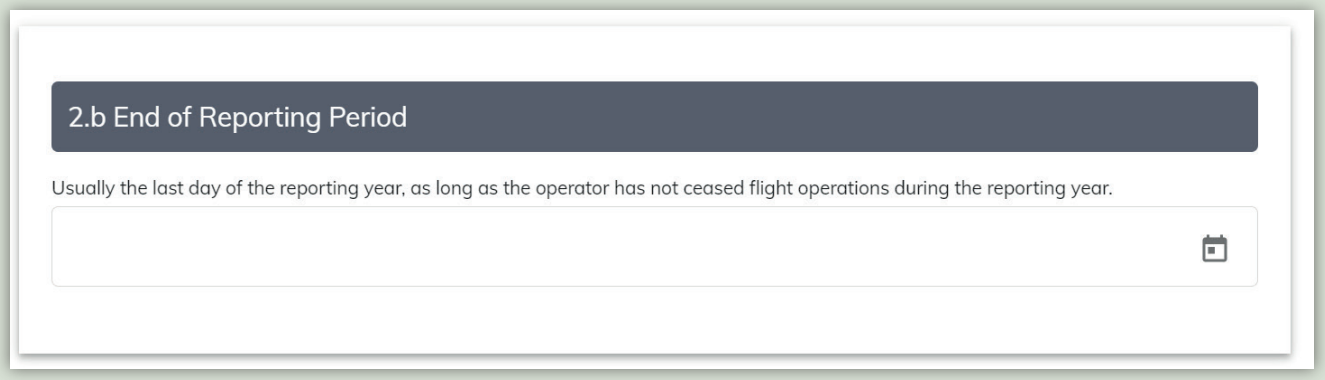
In this section, the data entered in the Monitoring Plans Module for the corporate details and aviation activities of Aeroplane Operators appear automatically. In other words, Users do not enter any data in this section.

6.3.2 Underlying Basic Information of The Emissions Report

In this section, the Compliance Period including the year for which emissions will be reported and details of the Monitoring Plan verified by the DGCA for that Compliance Period, reporting year and reporting method (i.e., Fuel Use Monitoring Method and/or ICAO CORSIA CO_2 Estimation and Reporting Tool (CERT)) appear automatically. Users should make a selection indicating the end of the Emissions Reporting period (Figure 30).

As long as Aeroplane Operators do not stop their flight activities during a reporting year, the relevant period is mostly the last day of the reporting year.

Figure 30: Emissions Report – End of the reporting period



6.3.3 Aeroplane Fleet and Fuel Types

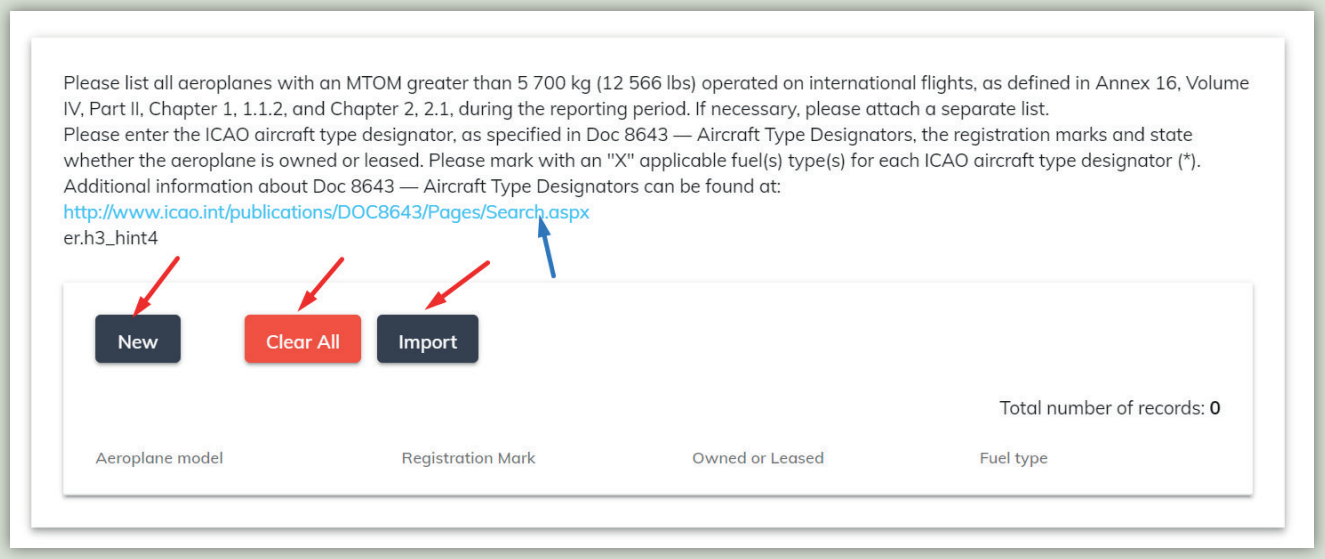
In this sub-section, Users must enter all aeroplane types stated in the Emissions Monitoring Plan, specified under the Doc 8643-Aeroplane Type Designators, including the owned aeroplanes as well as the rented ones. A list of all aeroplane types can be accessed through an external link given in this section (Figure 31).

Data can be entered in two ways in this sub-section, as described in the Monitoring Plans Module (Figure 18 & Figure 31):

1. Users click on the “New” button and fill in, according to the aeroplane types, the form that appears.
2. Users click on the “Import” button and upload to the system an Excel file that includes the aeroplane types.

Users can click on the “Clear All” button to erase the data entered by filling in the form or uploading an Excel file.

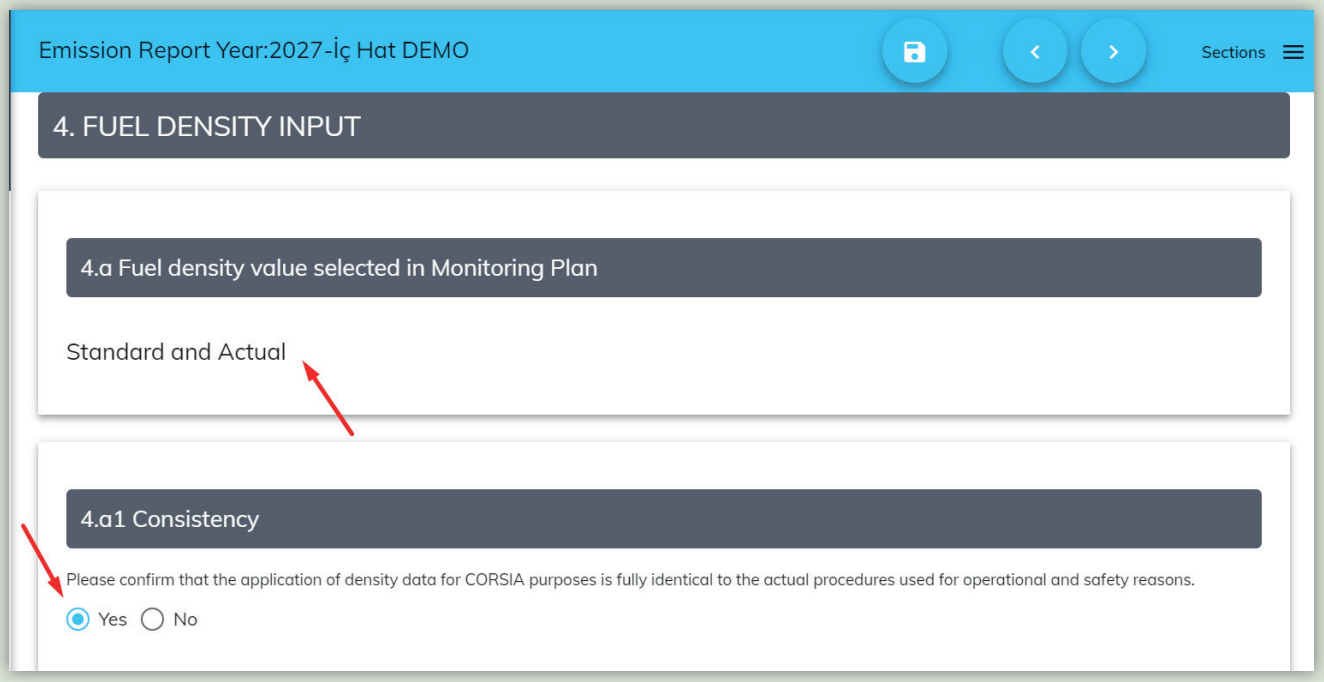
Figure 31: Aeroplane Fleet and Fuel Types



6.3.4 Fuel Density Input

In this section, the statement for fuel density value selected previously in the Monitoring Plan (i.e., *Standard, Actual or Standard and Actual*) appears automatically. Additionally, in this section, Users are obliged to confirm, by marking the "Yes" option, that implementation of the density data for CORSIA is the same as the actual procedures used for operational reasons and security reasons.

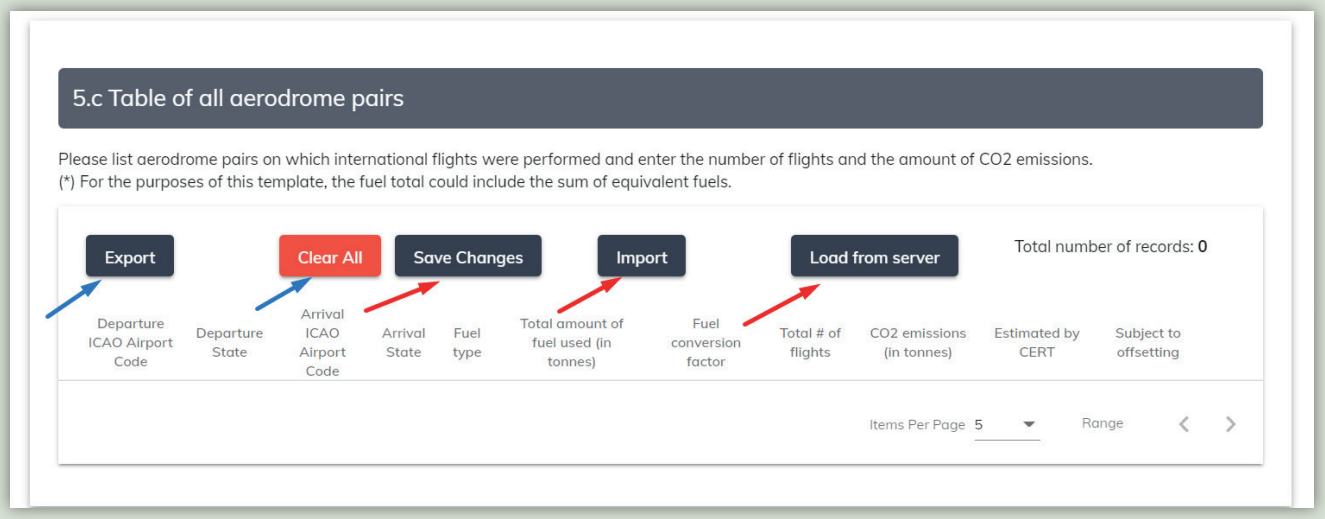
Figure 32: Fuel Density Input



6.3.5 Reporting Aerodrome Pairs

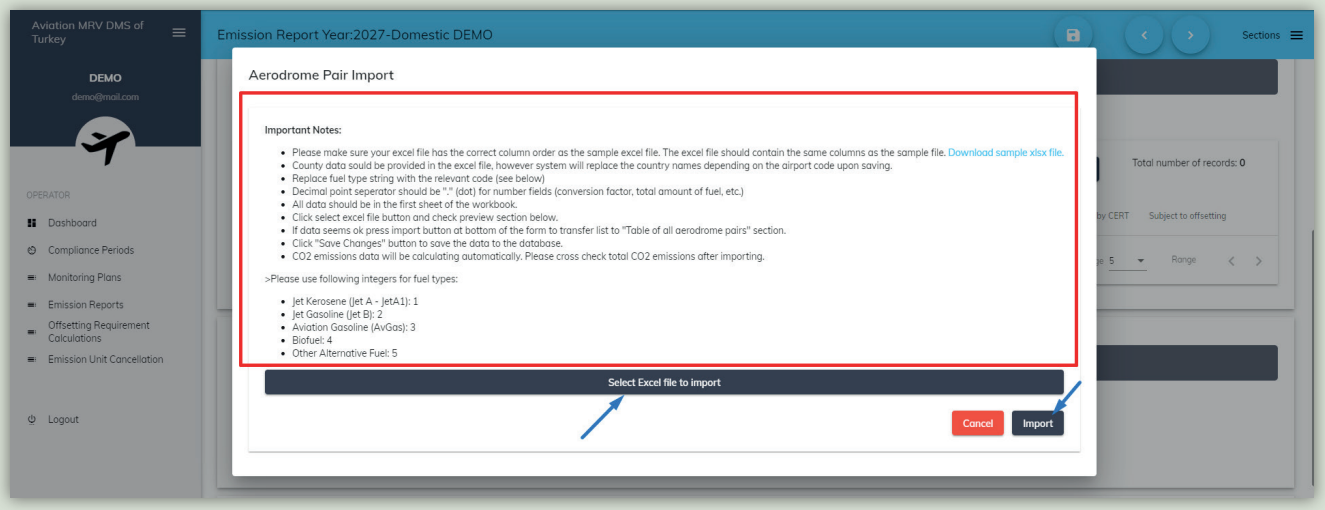
In this section, Users enter data for all Aerodrome pairs operating in the reporting year. Users can enter data on aerodrome pairs by entering them on an Excel file draft that they can download from the system and by uploading this file that contains the aerodrome pairs. To this end, first, they must click on the “Import” button in sub-section 5c (Figure 33).

Figure 33: Table containing all Aerodrome Pairs



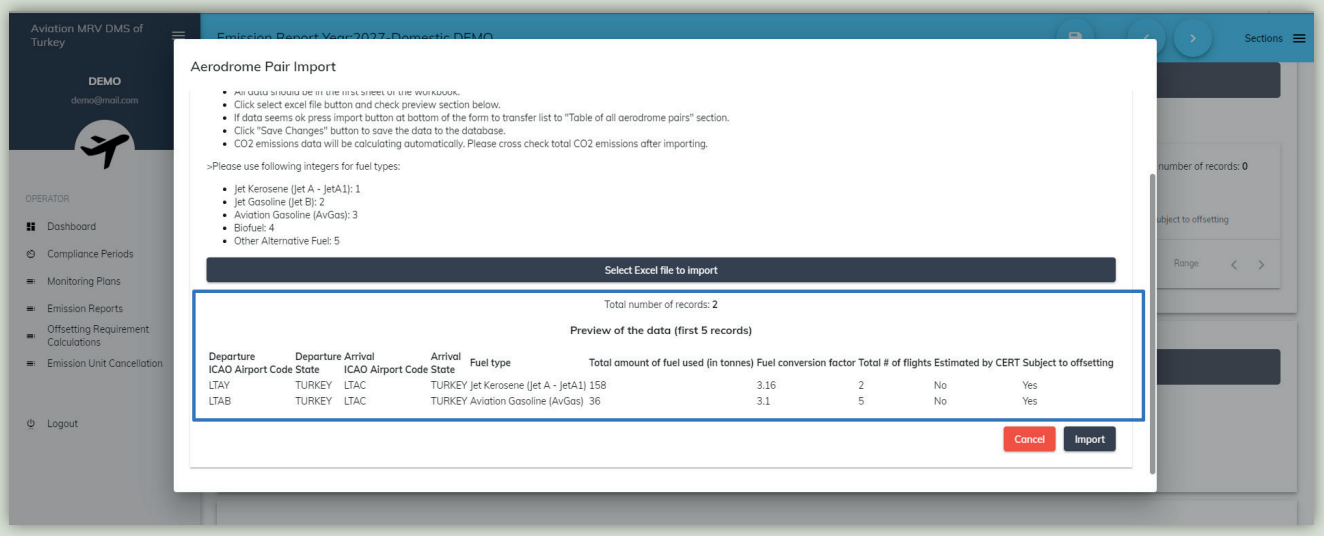
By means of the window that opens after clicking on this button, the relevant draft Excel file can be downloaded and the version of the draft revised with the Aerodrome Pairs data can be uploaded to the system. In case data are entered on the Excel file, instructions on the window that opens should be read (Figure 34).

Figure 34: Data entry for Aerodrome Pairs - import



When Users download the Excel file, information that applies to all aerodrome pairs, for which they entered data on the same window, are listed (Figure 35).

Figure 35: Data entry for Aerodrome Pairs – List of Aerodrome Pairs



Once the list appears, users should click on the “Import” button and complete the data entry procedure (Figure 36). The entered data on Aerodrome Pairs are ultimately listed in section 5c. Users can revise, wholly or partly, the data on Aerodrome Pairs, by means of the new window that will open when they click on the “Edit” button on the far right of the relevant line on this list. Besides, the relevant data entry can be erased permanently by clicking on the “Erase” button below the “Edit” button (Figure 37).

Figure 36: Data entry for Aerodrome Pairs – final list

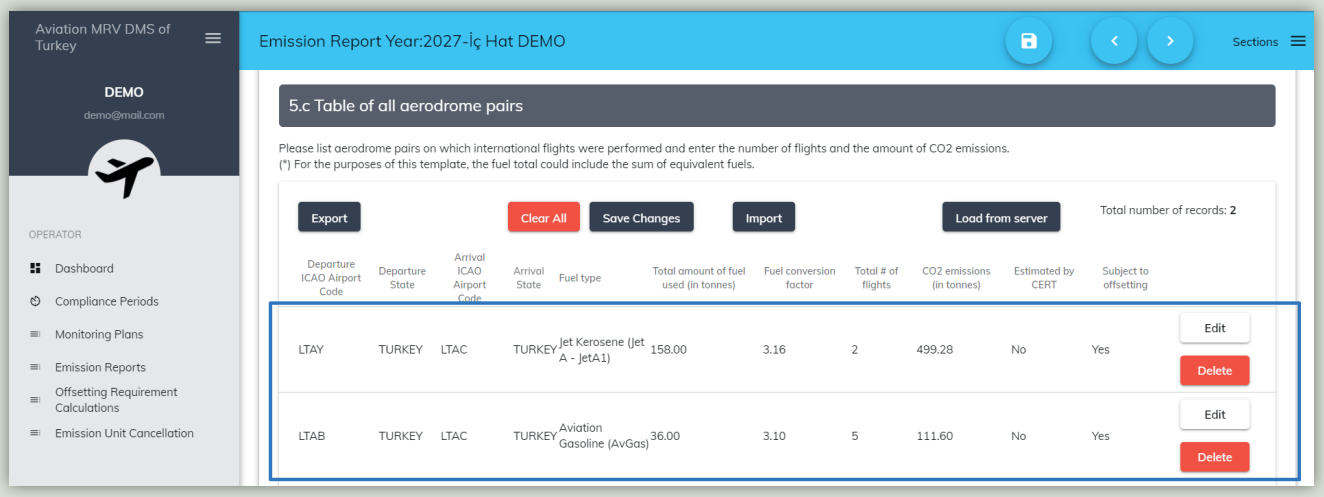
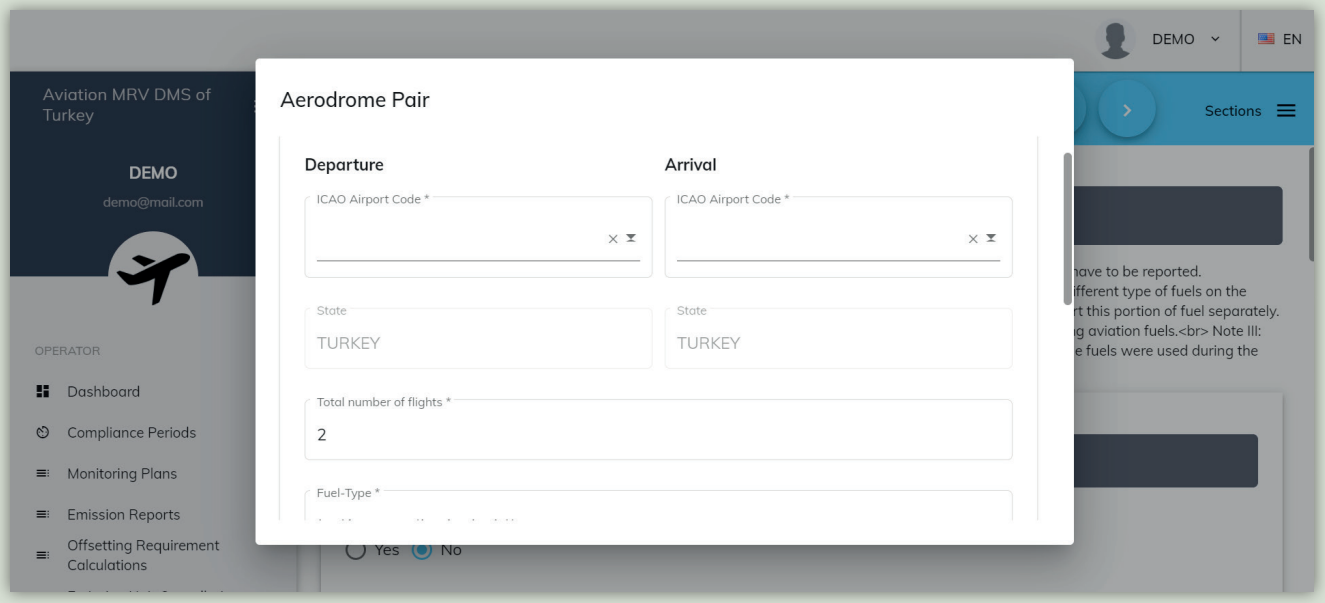


Figure 37: Data entry for Aerodrome Pairs – editing data



Data should be entered for both directions between the Aerodrome pairs (as A-B and B-A), if applicable.

If Aeroplane Operators use different types of fuels for the same Aerodrome pair with different fuel conversion factors, they must create as many Aerodrome Pairs as the number of such scenarios and report this part of the fuel separately. In this context, it should be remembered that emissions from CORSIA eligible fuels are calculated using the fuel conversion factor obtained from the eligible aviation fuels.

If CORSIA eligible fuels are used during the reporting period, please also fill in the CORSIA eligible fuels report template.

6.3.6. Data Gaps

In this section, data are entered to fill in data gaps throughout the reporting year. Aeroplane Operators that have data gaps are obliged to fill in the relevant sub-sections.

Data gaps constitute the missing data necessary for the correct determination of CO_2 emissions, but, cannot be taken from primary resources and cannot be reconstructed from secondary resources.

6.3.7 Verification Body

In this section, Users assign a Verification Body that will evaluate the Emissions Report. A Verification Body can be assigned in two ways:

1. Introduction to the DMS and assignment of a new Verification Body: If the Verification Body to be assigned by an Aeroplane Operator for the relevant

Emissions Report will operate for the first time within the MRV Scheme for the Turkey's Aviation Sector, the Aeroplane Operator must introduce that Verification Body to the DMS, via the Verification Body. To accomplish the assignment, the e-mail address used for accreditation by the Verification Body must be entered in this section (Figure 38). Following this action, as the Verification Body was not previously registered at the MRV Scheme, information on the Verification Body is not presented to the User by the DMS and the User is asked to create a new verifier (Figure 39). The User can introduce a new Verification Body to the system, by entering the accreditation details of the Verification Body on a new window that opens when they click on the "Add a Verification Body to the System" button (Figure 40). Once the Verification Body is introduced, the User clicks on the "Assign this Verification Body" button, on the lower right of the sub-section "Available Verification Body Details" and the request for assigning the Verification Body is sent to the relevant Verification Body (Figure 41). The assignment process is completed when the Verification Body accepts that request.

2. Assignment of a Verification Body registered at the DMS: If the Verification Body to be assigned by the Aeroplane Operator for the relevant Emissions Report previously operated within the MRV Scheme for the Turkey's Aviation Sector and is, therefore, an organization registered at the DMS, the system will present the details of that Verification Body to the User, when the User enters the accredited e-mail address in the relevant search box and click on the "Find" button (Figure 38). In the next step, the User can click on the "Assign this Verification Body" button and send the request for assigning the Verification Body to the relevant Verification Body (Figure 41).

Figure 38: Searching for a Verification Body

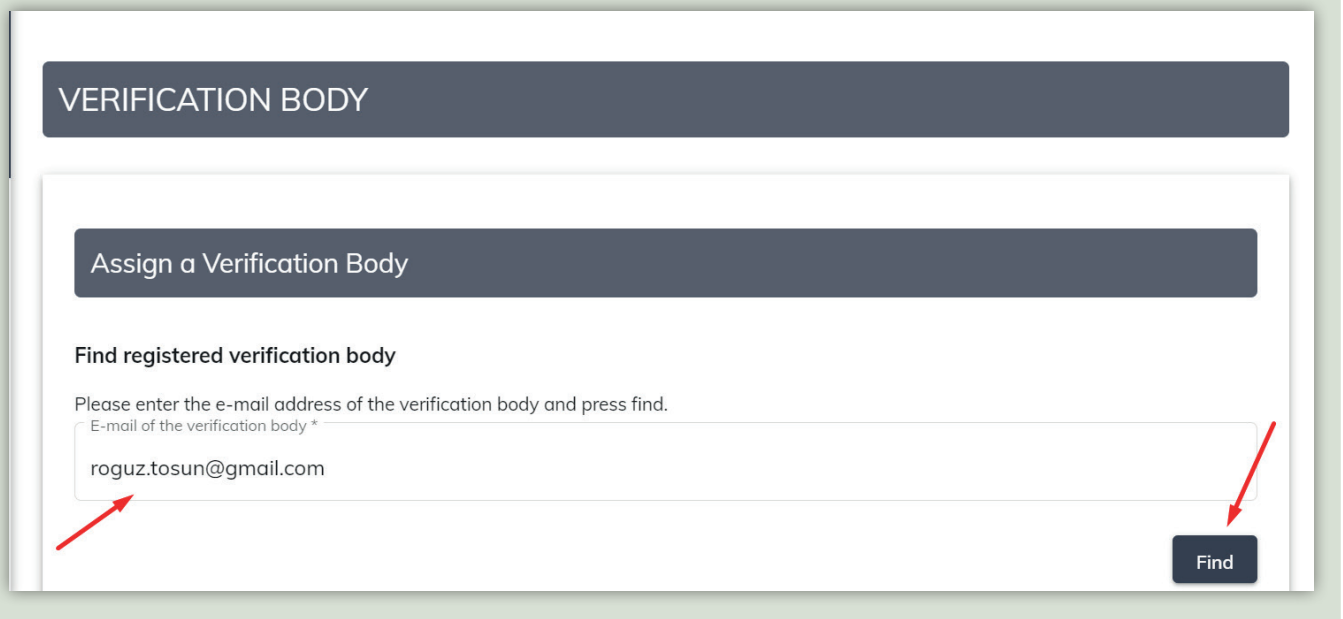


Figure 39: Introducing a new Verification Body - 1

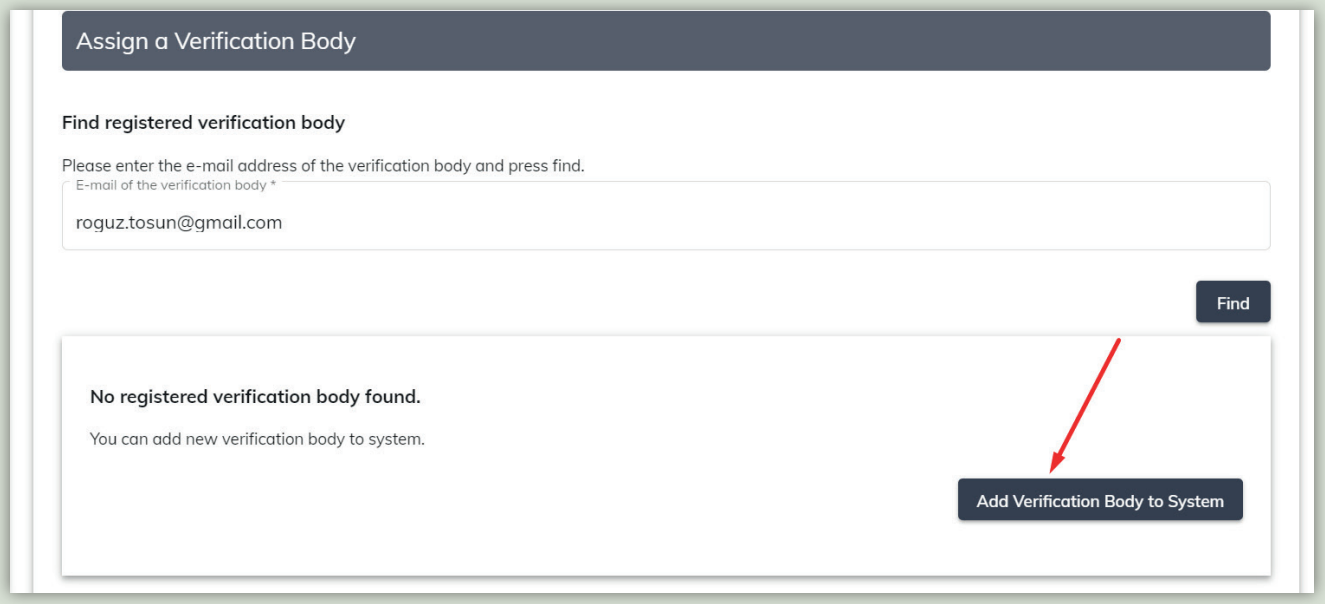


Figure 40: Introducing a new Verification Body - 2

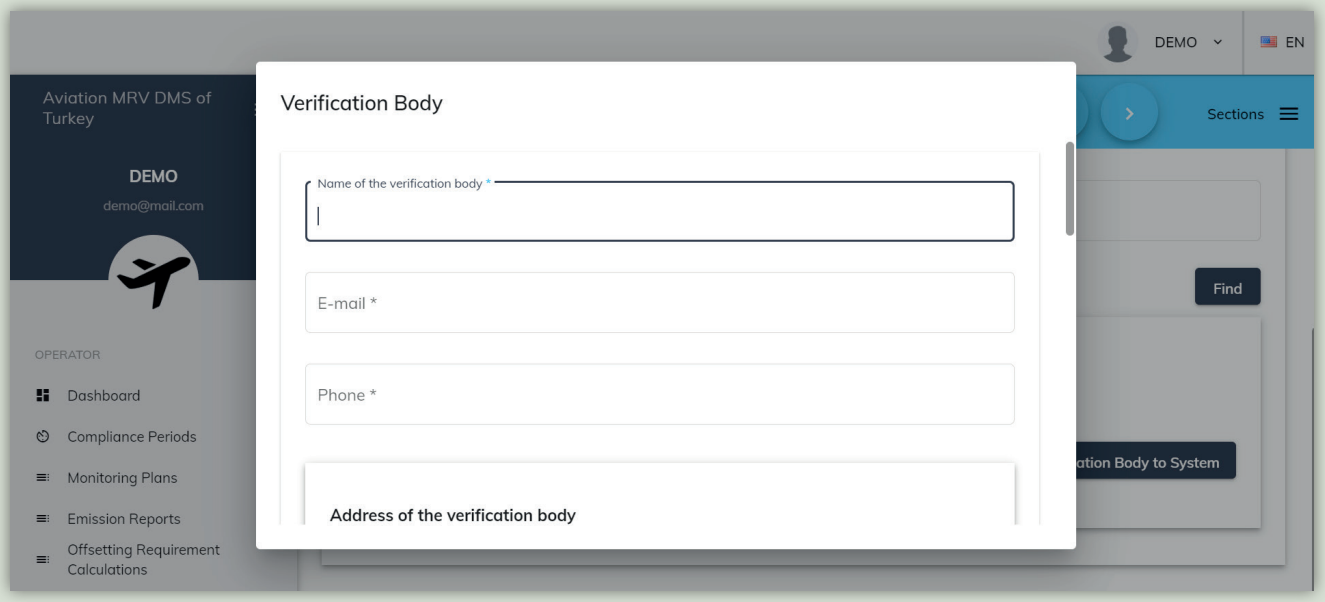
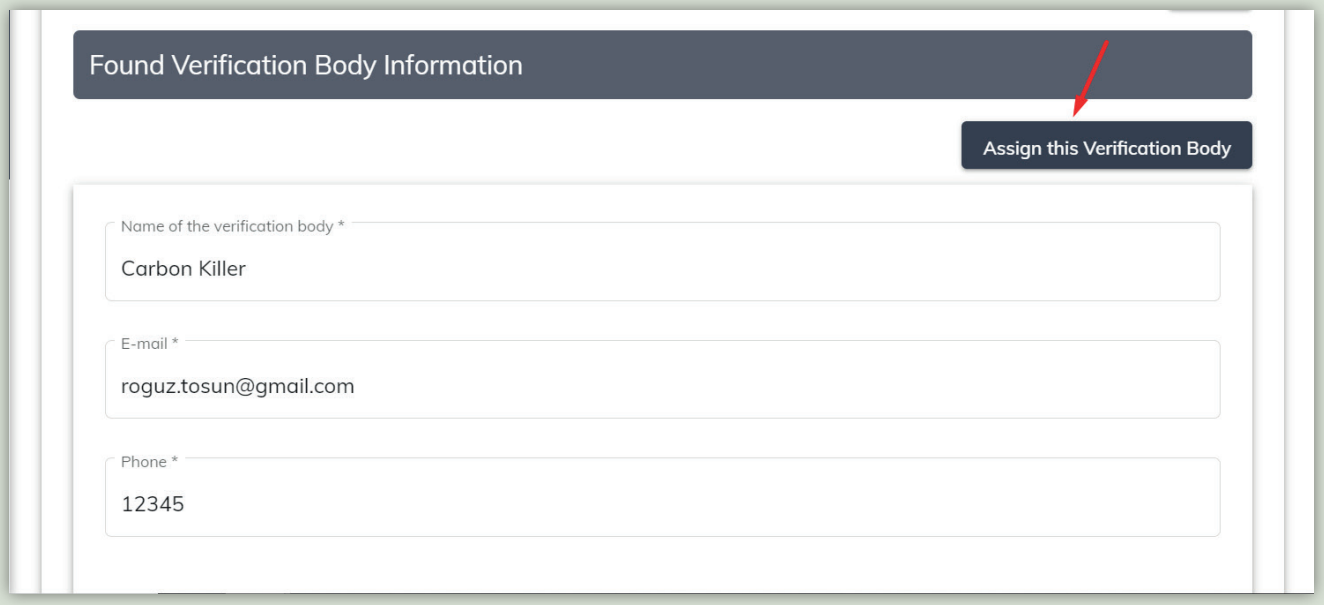
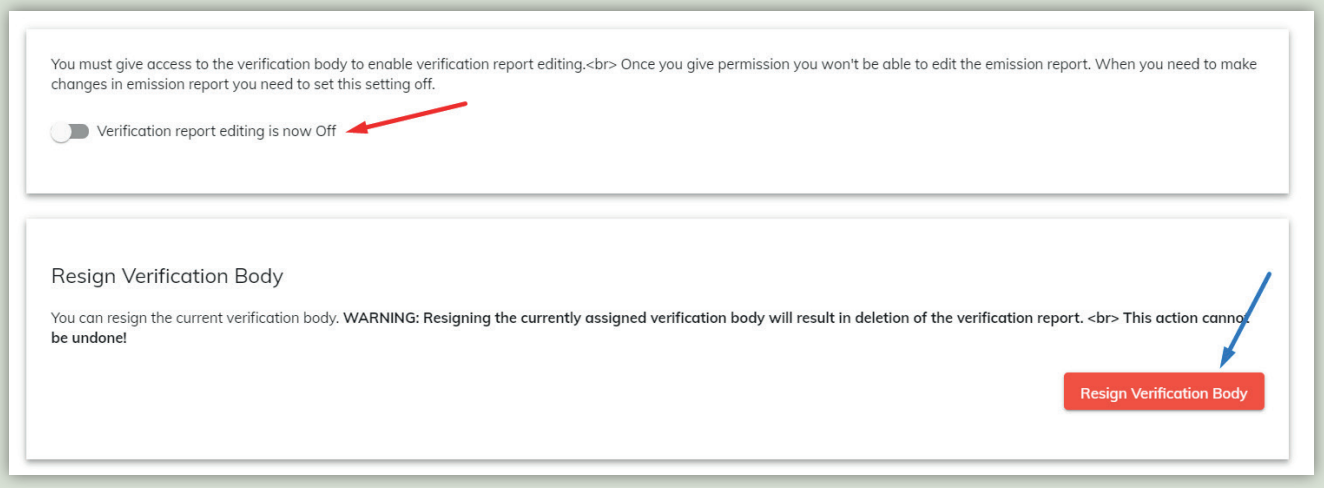


Figure 41: Assigning a Verification Body



After the Aeroplane Operators complete the Emissions Reporting and assign a Verification Body, they should click on the "Verification Report in progress" to submit the report to the opinion of the Verification Body and grant access for the report to the Verification Body (Figure 42).

Figure 42: Granting access to the Verification Body



Aeroplane Operators cannot edit the Emissions Report after the Emissions Report is submitted to the Verification Body. If any change is required in the Emissions Report, they should revert it to inactive by clicking on this button again. **It is important to obtain confirmation from the authorized Verification Body before performing this action.**

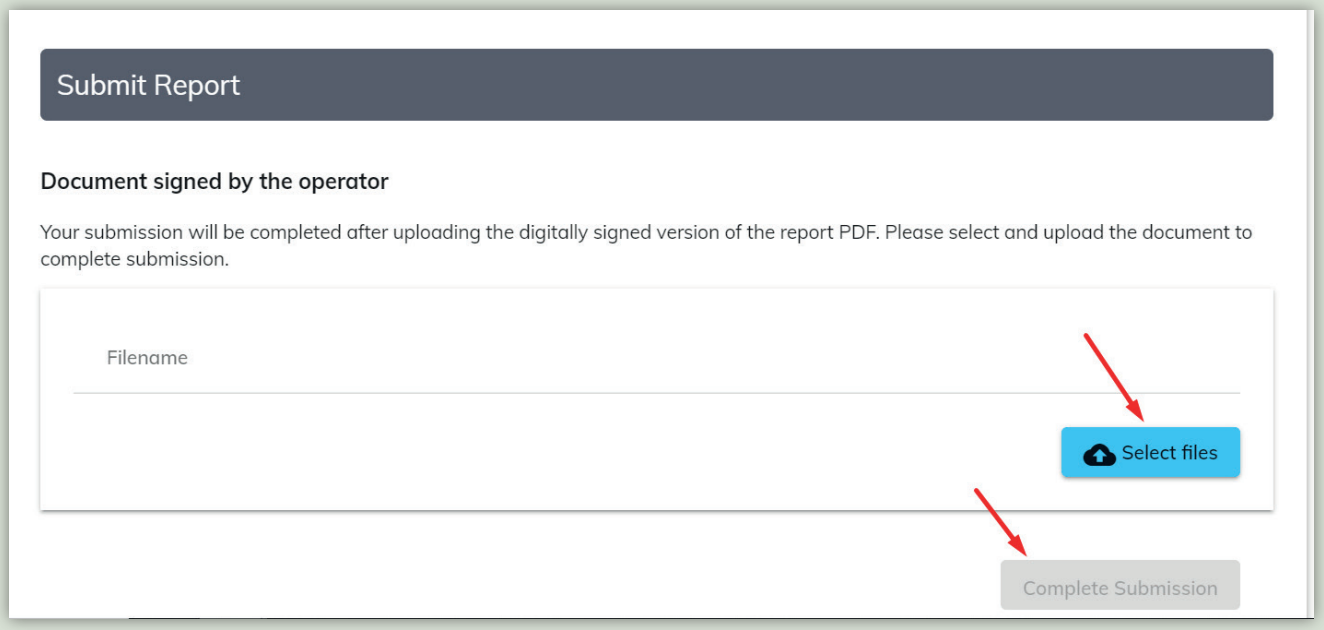
In case of scenarios that entail replacing the Verification Body during the verification process, Aeroplane Operators can perform this action by clicking on the "Replace the Verification Body" button. On the other hand, as this action will lead to erasing the draft Verification Report, it cannot be undone (Figure 42).

6.3.8 Submission

After the Verification Body verifies the Emissions Report and uploads an e-signed PDF output of the relevant Verification Report to the system[11], the Aeroplane Operator must upload the verified Emissions Report to the system, to be submitted to the opinion of the DGCA. To this end, the Aeroplane Operator must first generate - over the Data Management System - a PDF output of the Emissions Report and then upload an e-signed copy of that output to the system - again over the DMS (Figure 43 and Figure 44).

Figure 43: Generating a PDF output of the Emissions Report

Figure 44: Uploading the Emissions Report to the system



6.4. Offsetting Requirement Calculations Module

Aeroplane Operators can perform the following actions over the Offsetting Requirement Calculations Module:

- Calculating the emission volume that needs to be subject to offsetting under CORSIA
- Preparing an Offsetting Requirement Calculation Report
- Submitting the generated Offsetting Requirement Calculation Report to the opinion of the DGCA
- Editing the Offsetting Requirement Calculation Reports submitted to the opinion of the DGCA

This module consists of the 6 main sections listed below:

1. Aeroplane Operator Identification and Description of Activities
2. Compliance Period Years Included in the Calculations
3. Offsetting Requirements Calculations
4. Emissions Reductions from the use of CORSIA Eligible Fuels
5. Aeroplane Operator's Total Final Offsetting Requirements for Compliance Period
6. Submitting the Offsetting Report

Users can click on the "Create" button on the home page of the Module and start preparing an Offsetting Requirement Calculation Report for an Emissions Report verified previously by the Verification Body and approved by the DGCA (Figure 45). To this end, the relevant Compliance Period and the year subject to offsetting calculation should be selected on the window that opens after clicking on that button (Figure 46).

Figure 45: Adding a new Offsetting Requirement Calculation Report

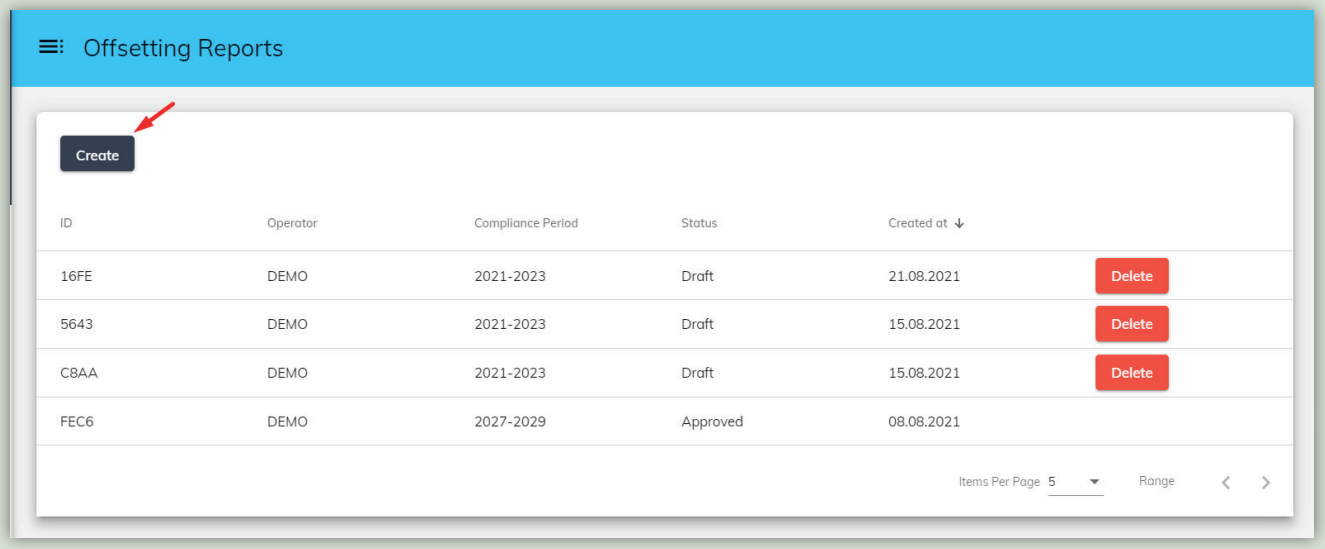
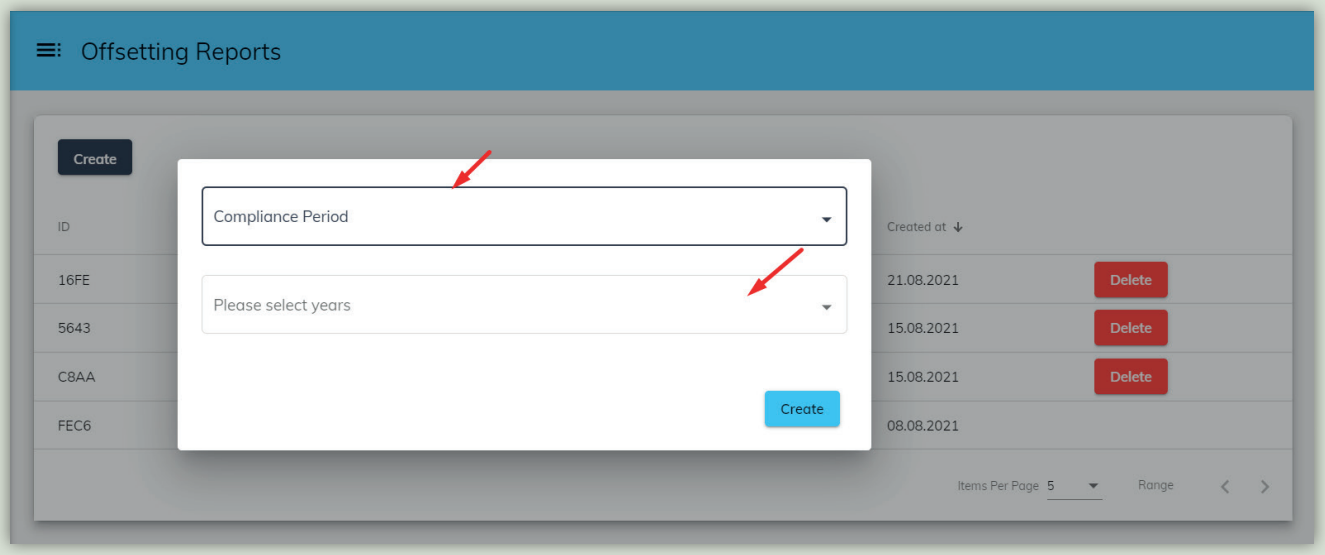


Figure 46: Offsetting Calculation – Compliance Period and Year



The DMS has been designed to allow sections 1. Identity Details of the Aeroplane Operator and 2. Compliance Period Years to automatically draw the relevant data from the associated Emissions Report. Aeroplane Operators should fill in the following sections carefully.

6.4.1 Offsetting Requirements Calculations

To calculate the offsetting requirements correctly, it is important that data entries in the following sections are completed elaborately:

a) State Pairs / Flights subject to offsetting requirements: In this sub-section, Users should filter and introduce to the system the aerodrome pairs by their ICAO membership status during the relevant emissions report year, to calculate the emissions that will be subject to offset. To this end, Users can download the relevant Excel draft from the window that opens when they click on the “Import” button (Figure 47). Then, they should only keep the member states of the ICAO during the relevant year and delete the nonmember states, amongst the states they make flights (take-off and landing) to and from, on the list of countries that can be viewed on that Excel file (Figure 49). Following that action, the relevant Excel file can be introduced to the system by using the “Choose a file to import” and “Import” buttons (Figure 48).

Figure 47: State pairs subject to offsetting requirements - 1

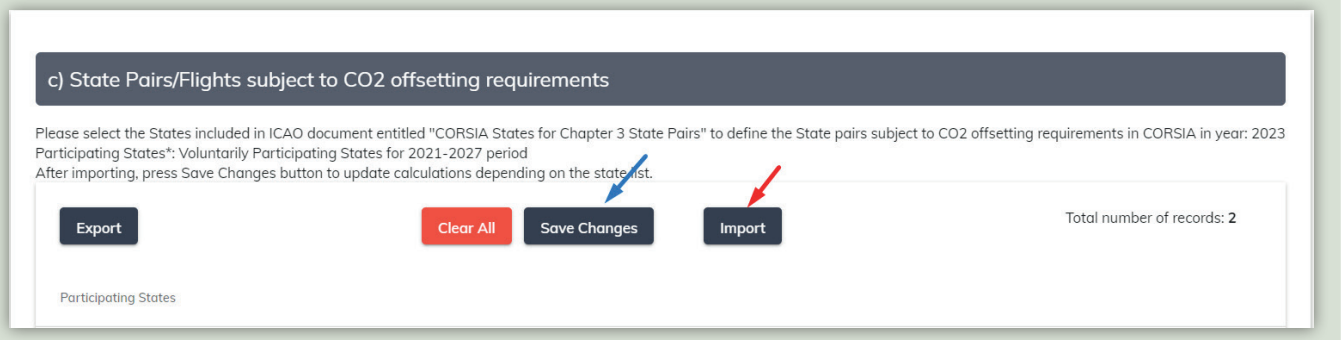


Figure 48: State pairs subject to offsetting requirements - 2

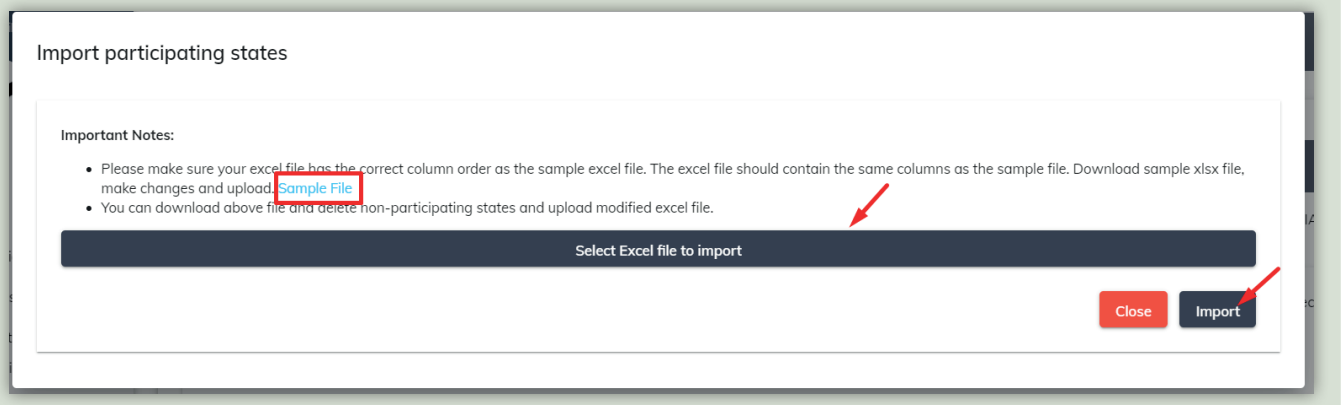
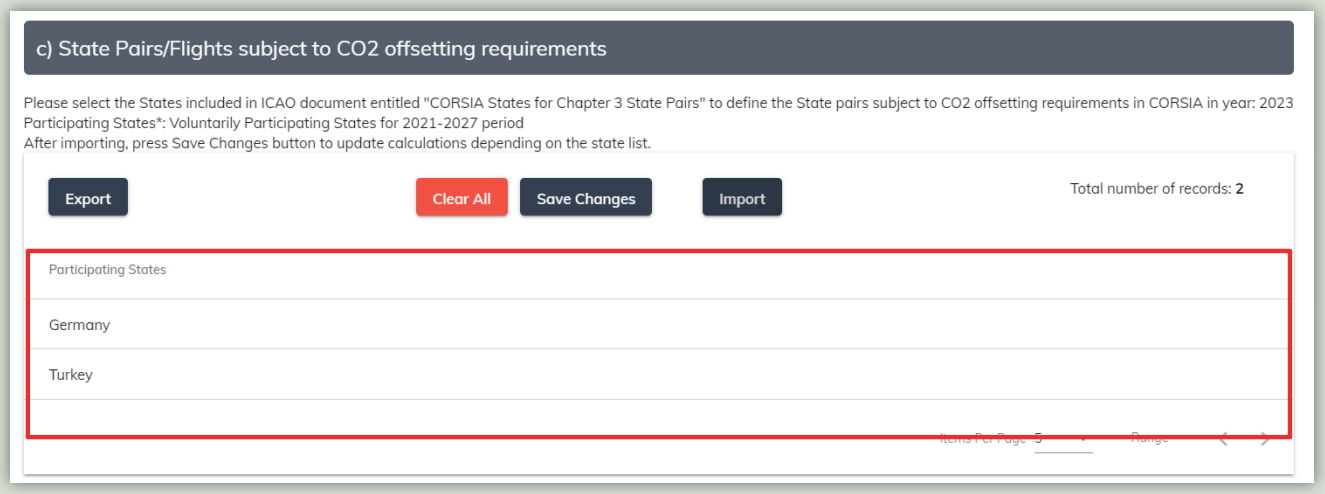


Figure 49: A sample file was generated for an Aeroplane Operator that conducted flights only from and to Germany and Turkey

	A	B
1	Code	State
2	82	Germany
3	224	Turkey
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		

When Users upload the Excel file, the information available for all state pairs they entered data for are listed on the same window. Once the list appears, they should click on the “Save Changes” button and complete the data entry action (Figure 50).

Figure 50: State pairs subject to offsetting requirements – 3



b) Sectoral and Individual percentage values (Sy% and Oy%): In this section, Users should enter the "Sectoral percentage value (Sy%)" and "Individual percentage value (Oy%)" that constitute inputs for the calculation of offsetting requirements and that pertain to the relevant emission year.

The following points must be considered in entering these data:

- In the calculations to be made for the emission years between 1 January 2021 and 31 December 2029, the Sy% and Oy% values will be taken as 0%.
- In the calculations to be made for the emission years after 1 January 2030, the Sy% and Oy% values will be determined by the DGCA and aeroplane operators will be informed accordingly.

c) An Aeroplane Operator's CO2 emissions from flights subject to offsetting requirements (OEy): This section will be automatically calculated by the DMS and the calculation result will also appear automatically in the relevant box.

d) An Aeroplane Operator's Growth Factor (OGFy): This section will be automatically calculated by the DMS and the calculation result will also appear automatically in the relevant box.

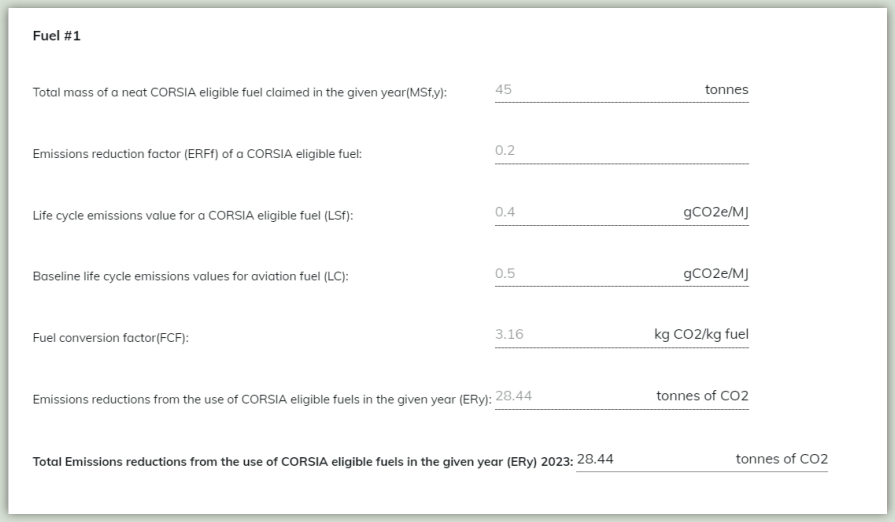
e) Sectoral Growth Factor (SGFy): Aeroplane Operators will enter the Sectoral Growth Factor (SGFy) as defined in the ICAO document titled CORSIA Annual Sectoral Growth Factor (SGF), available on the ICAO CORSIA website.

f) An Aeroplane Operator's total offsetting requirement (ORy) for 2023: This section will be automatically calculated by the DMS and the calculation result will also appear automatically in the relevant box.

6.4.2 Emissions Reductions from the Use of CORSIA Eligible Fuels

Data entered for the emissions reductions reached as a result of using CORSIA eligible fuel and the relevant calculations of emissions reductions volume appear automatically in this section of the associated Emissions Report (Figure 51).

Figure 51: Offsetting account – Emissions reductions



6.4.3 An Aeroplane Operator's Final Offsetting Requirements for the Compliance Period

An Aeroplane Operator's volume details for;

- CO2 emissions from all international flights
- CO2 emissions from flights subject to offsetting requirements
- Offsetting requirements in the emissions year
- Emissions reductions from the use of CORSIA eligible fuels
- Total offsetting requirements

are automatically calculated and appear in the table in this section (Figure 52).

Figure 52: Table of final offsetting requirements

Years		CO2 Emissions on all international flights (tonnes of CO2)	CO2 emissions from flights subject to offsetting requirements (tonnes of CO2)	Aeroplane operator's offsetting requirements in the given year (tonnes of CO2)	Emissions reductions from the use of CORSIA eligible fuels (tonnes of CO2)	Aeroplane operator's total offsetting requirements (tonnes of CO2)
2021-2023	2021					
	2022					
	2023	0.000	0.000	0.000	28.440	-28.440
TOTAL		0.000	0.000	0.000	28.440	-28.440

6.4.3 Submitting the Offsetting Report

Users should submit the Offsetting Requirement Calculation Report to the opinion of the DGCA, after completing the data entries related to the Report:

- Generating a PDF file of the Report
- Downloading the generated PDF file and digitally signing the downloaded file
- Uploading the signed document to the system

Status of the Report can be checked after being submitted to the opinion of the DGCA. In this context, reports approved by the DGCA can be offset and the relevant Emissions Unit Cancellation Report can be prepared, whereas rejected reports should be prepared again, according to the opinions given by the DGCA.

The offsetting Requirement Calculation Report is not submitted to the opinion of the Verification Body.

6.5 Emissions Unit Cancellation Module

Aeroplane Operators can perform the following actions over the Emissions Unit Cancellation Module:

- Entering data about the details of offsetting actions performed under CORSIA
- Preparing an Emissions Unit Cancellation Report
- Submitting the created Emissions Unit Cancellation Report to the opinion of the Verification Body and the DGCA
- Editing the Emissions Unit Cancellation Reports submitted to the opinion of the Verification Body and the DGCA

This module consists of the 5 main sections listed below:

1. Aeroplane Operator Identification and Description of Activities
2. Compliance Period Years Included in Calculations
3. Consolidated Identifying Information for Cancelled Emissions Units
4. Verification Body
5. Submission

Users can click on the “Create” button on the home page of the Module and start preparing an Emissions Unit Cancellation Report for an Offsetting Requirement Calculation Report previously approved by the DGCA (Figure 53). To this end, the relevant Compliance Period and the emission year subject to emission offsetting should be selected on the window that opens after clicking on that button (Figure 54).

Figure 53: Adding a new Emissions Unit Cancellation Report

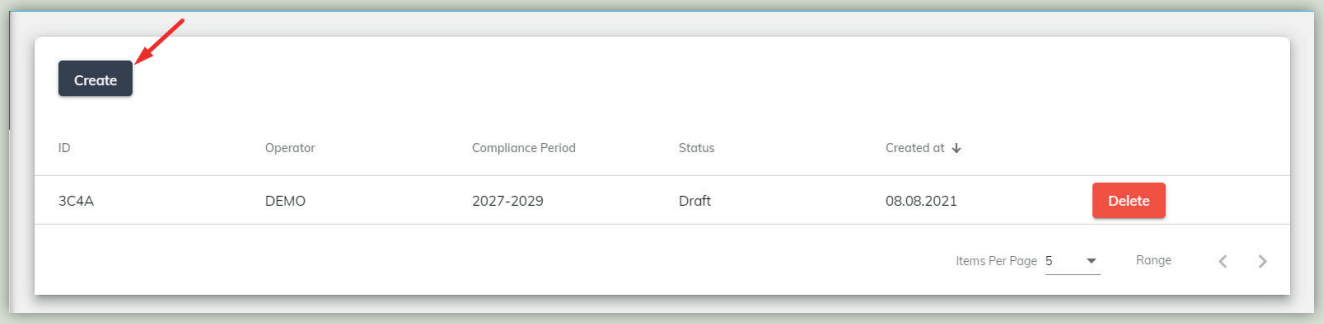
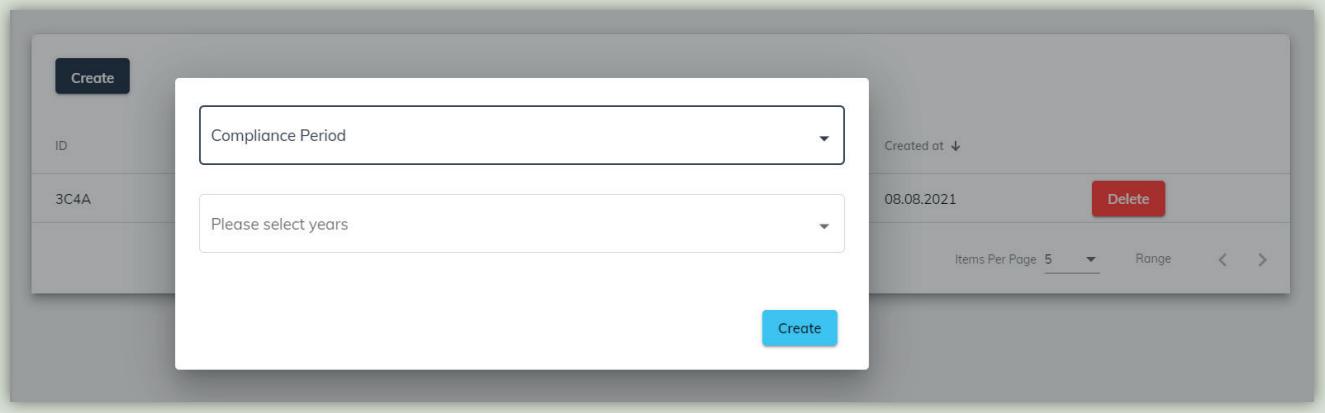


Figure 54: Emissions Unit Cancellation Module - Selecting a Compliance Period and Year

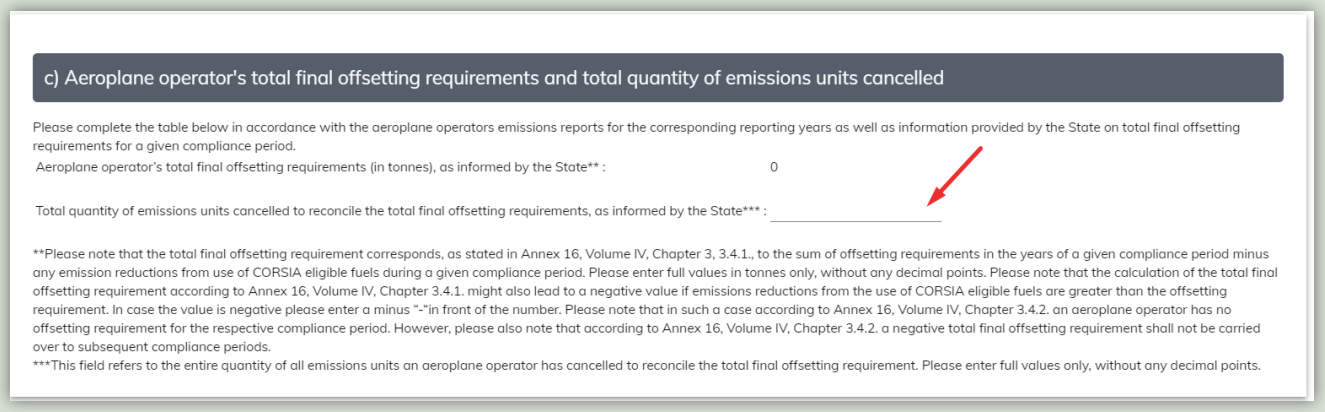


The DMS has been designed to allow section 1. Identity Details of the Aeroplane Operator to automatically draw the relevant data from the associated Emissions Report. Aeroplane Operators should fill in the following sections carefully.

6.5.1 Compliance Period Years Included in Calculations

The only action that needs to be taken by Users is to enter the total volume of the redeemed emissions unit to comply with the final offsetting requirement included in the verified and approved Offsetting Requirement Calculation Report (Figure 55). All the other data in this section will be filled in automatically by the DMS.

Figure 55: An Aeroplane Operator's total final offsetting requirements and the total amount of cancelled emissions units



6.5.2 Consolidated Identifying Information for Cancelled Emissions Units

In this section, Users should introduce to the system the emissions units cancelled to meet offsetting requirements. To this end, Users can download the relevant Excel draft from the window that opens when they click on the "Import" button (Figure 47). Then, they should only keep the member states of the ICAO during the relevant year and delete the nonmember states, amongst the states they make flights (take-off and landing) to and from, on the list of countries that can be viewed on that Excel file (Figure 49). Following that action, the relevant Excel file can be introduced to the system by using the "Choose a file to import" and "Import" buttons (Figure 48).

Figure 56: Emissions Unit Cancellation Report - Import

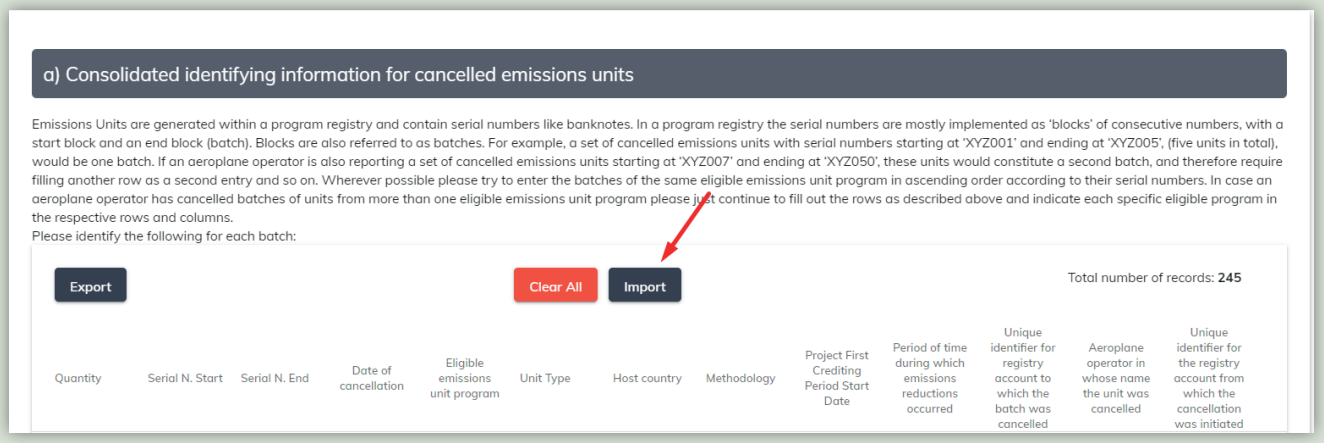
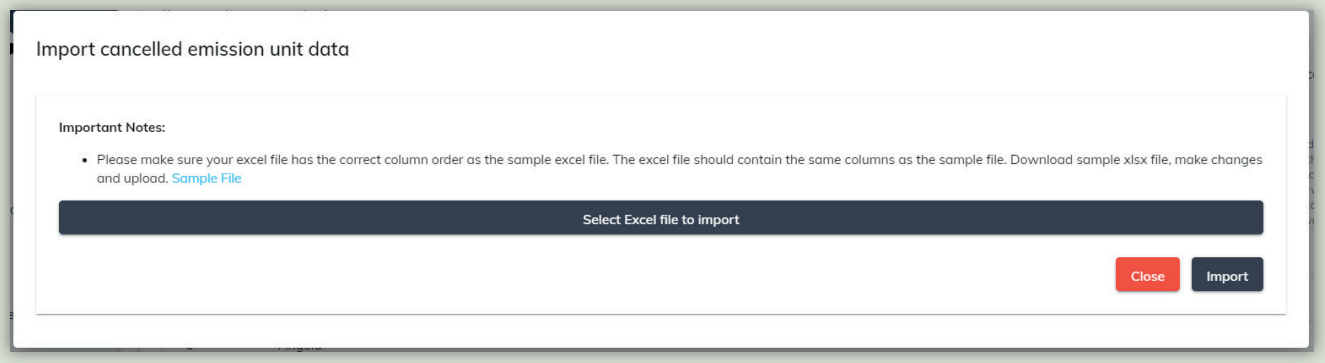


Figure 57: Emissions Unit Cancellation Report - Excel draft

Serial numbers[ii]		Date of cancellation[iii]	Eligible emissions unit program[iv]	Unit type[v]	Host country[vi]	Methodology[vii]	Demonstration of unit date eligibility[viii]		Unique identifier for registry account to which the batch was cancelled[ix]	Aeroplane operator in whose name the unit was cancelled[x]	Unique identifier for the registry account from which the cancellation was initiated[xi]
Start[xii]	End[xiii]						Project First Crediting Period Start Date	Period of time during which emissions reductions occurred			
udt-123	udf-123	13.03.2021	unit program	unit type	Host country	method	5.04.2020	6.12.2020	UUIDDDID	Pegasus	UUHHDJDU43

To facilitate entering data in the Excel draft for Aeroplane Operators, routing links to official references for the relevant information are embedded in each cell. These links should be viewed carefully before entering data. Besides, Aeroplane Operators must ensure that the file they upload to the DMS is under the same column and number as the sample Excel file.

Figure 58: Emissions Unit Cancellation Report - Import 2



6.5.3 Verification Body

In this section, Users assign a Verification Body that will evaluate the Emissions Unit Cancellation Report. A Verification Body can be assigned in two ways:

1. Introduction to the DMS and assignment of a new Verification Body: If the Verification Body to be assigned by an Aeroplane Operator for the relevant Emissions Unit Cancellation Report will operate for the first time within the MRV Scheme for the Turkey's Aviation Sector, the Aeroplane Operator must introduce that Verification Body to the DMS, via the Verification Body. To accomplish the assignment, the e-mail address used for accreditation by the Verification Body must be entered in this section (Figure 59). Following this action, as the Verification Body was not previously registered at the MRV Scheme, information on the Verification Body is not presented to the User by the DMS and the User is asked to create a new verifier (Figure 60). The User can introduce a new Verification Body to the system, by entering the accreditation details of the Verification Body on a new window that opens when they click on the "Add a Verification Body to the System" button (Figure 61). Once the Verification Body is introduced, the User clicks on the "Assign this Verification Body" button, on the lower right of the sub-section "Available Verification Body Details" and the request for assigning the Verification Body is sent to the relevant Verification Body (Figure 62). The assignment process is completed when the Verification Body accepts that request.

2. Assignment of a Verification Body registered at the DMS: If the Verification Body to be assigned by the Aeroplane Operator for the relevant Emissions Unit Cancellation Report previously operated within the MRV Scheme for the Turkey's Aviation Sector and is, therefore, an organization registered at the DMS, the system will present the details of that Verification Body to the User, when the User enters the accredited e-mail address in the relevant search box and click on the "Find" button (Figure 59). In the next step, the User can click on the "Assign this Verification Body" button and send the request for assigning the Verification Body to the relevant Verification Body (Figure 62).

Figure 59: Searching for a Verification Body

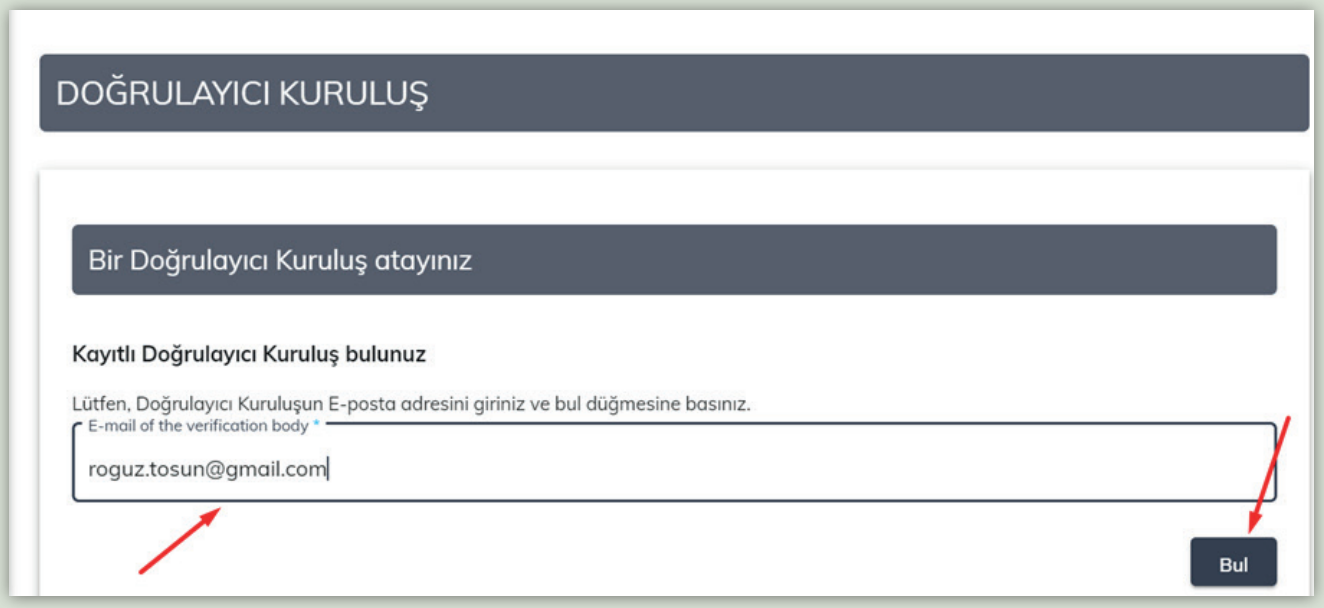


Figure 60: Introducing a new Verification Body - 1

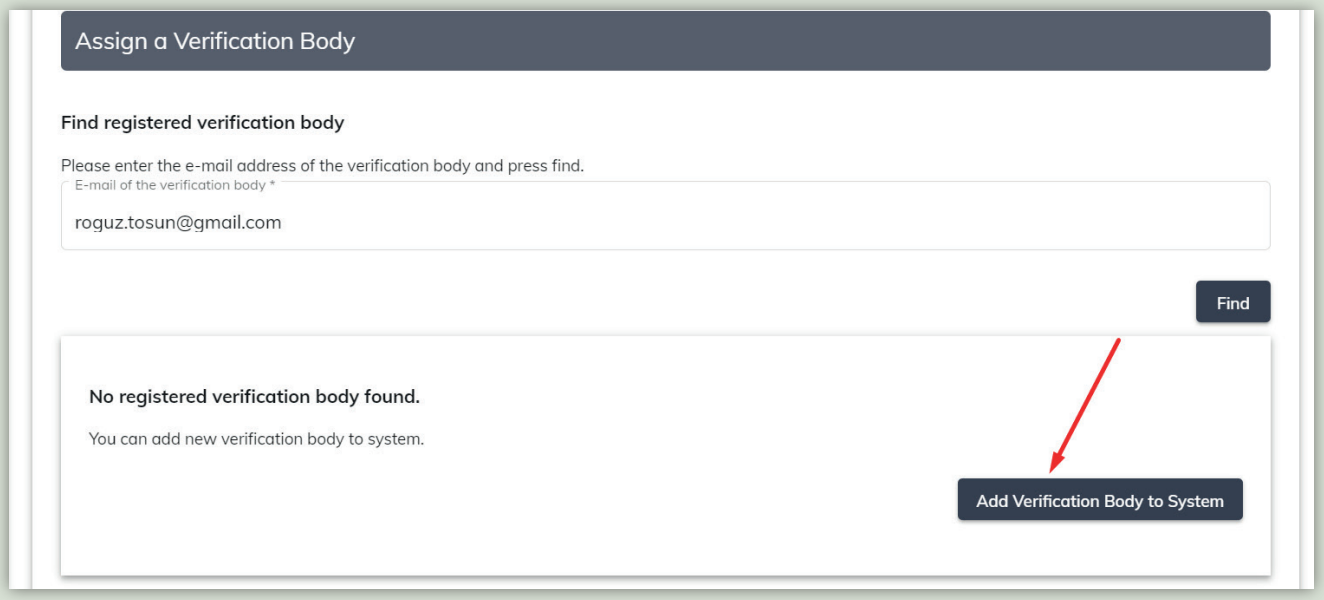


Figure 61: Introducing a new Verification Body - 2

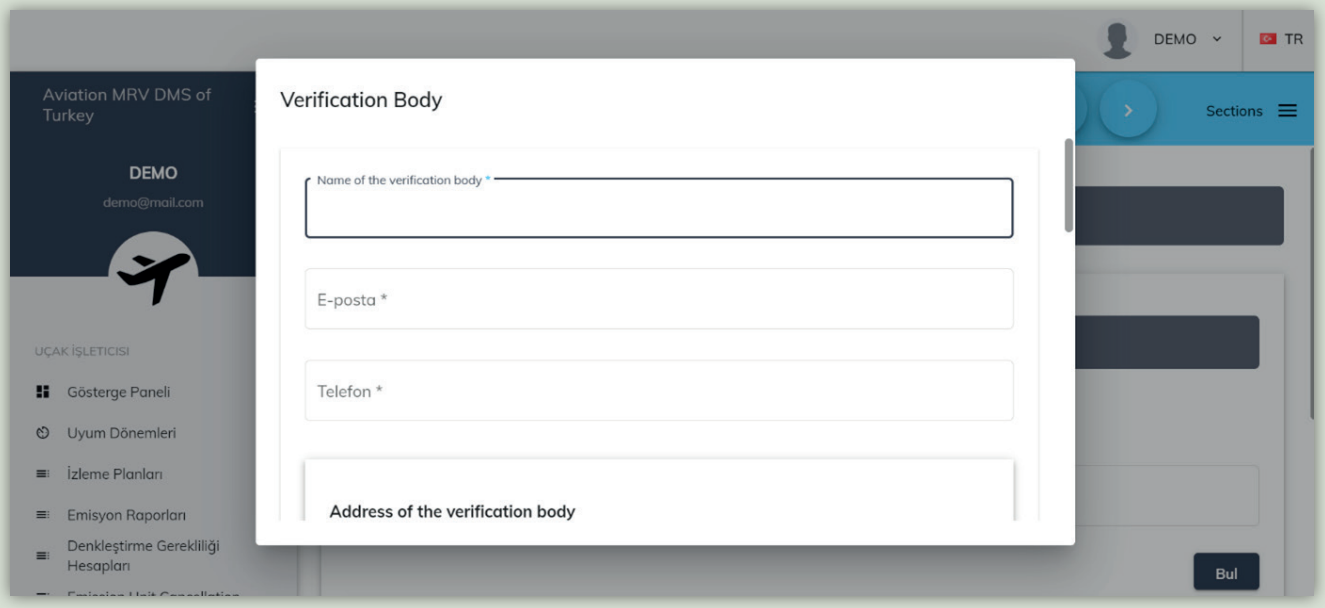
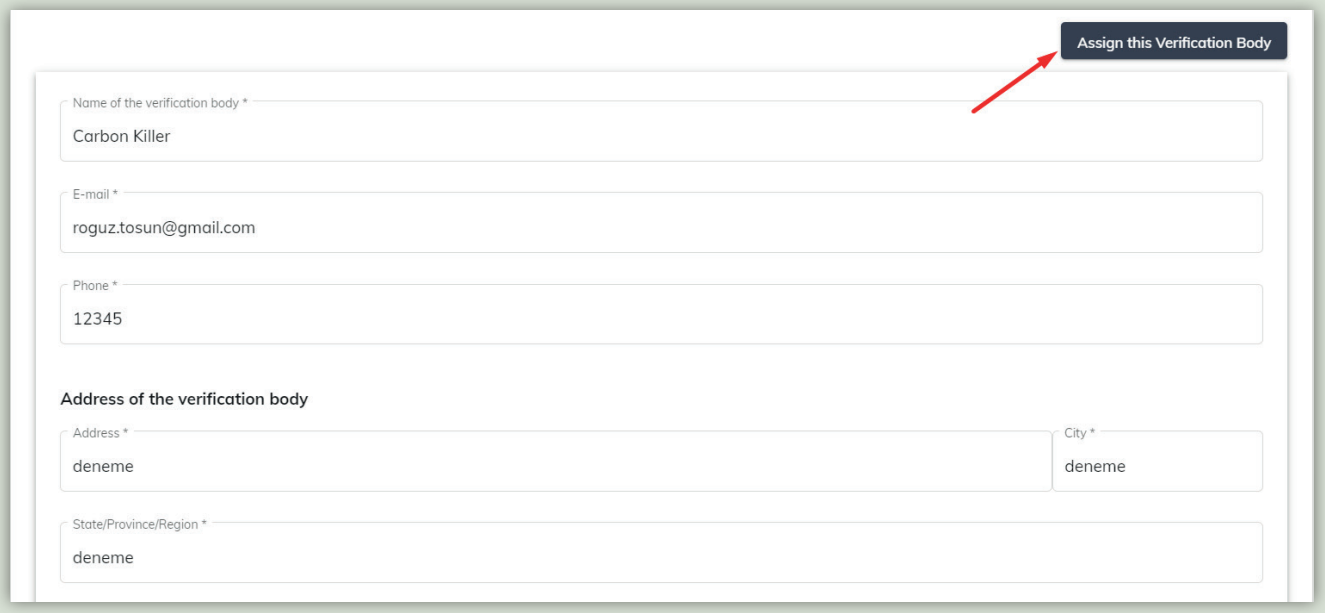
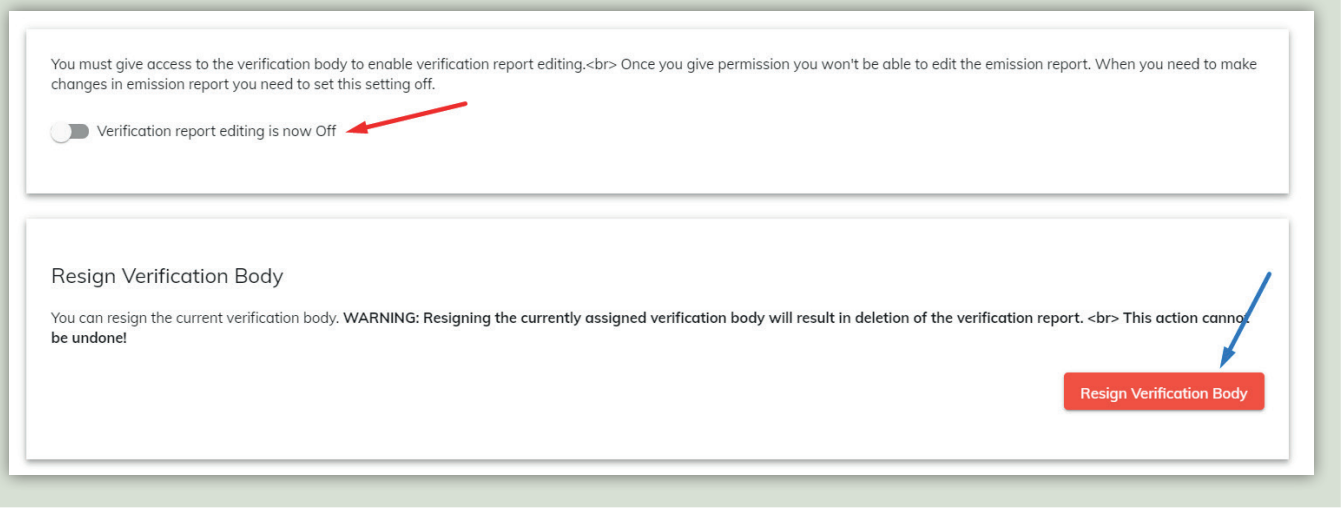


Figure 62: Assigning a Verification Body



After the Aeroplane Operators complete the Emissions Unit Cancellation Reporting and assign a Verification Body, they should click on the "Verification Report in progress" to submit the report to the opinion of the Verification Body and grant access for the report to the Verification Body (Figure 63).

Figure 63: Granting access to the Verification Body



Aeroplane Operators cannot edit the Emissions Unit Cancellation Report after the Emissions Unit Cancellation Report is submitted to the Verification Body. If any change is required in the Emissions Unit Cancellation Report, they should revert it to inactive by clicking on this button again. **It is important to obtain confirmation from the authorized Verification Body before performing this action.**

In case of scenarios that entail replacing the Verification Body during the verification process, Aeroplane Operators can perform this action by clicking on the "Replace the Verification Body" button. On the other hand, as this action will lead to erasing the draft Verification Report, it cannot be undone (Figure 63).

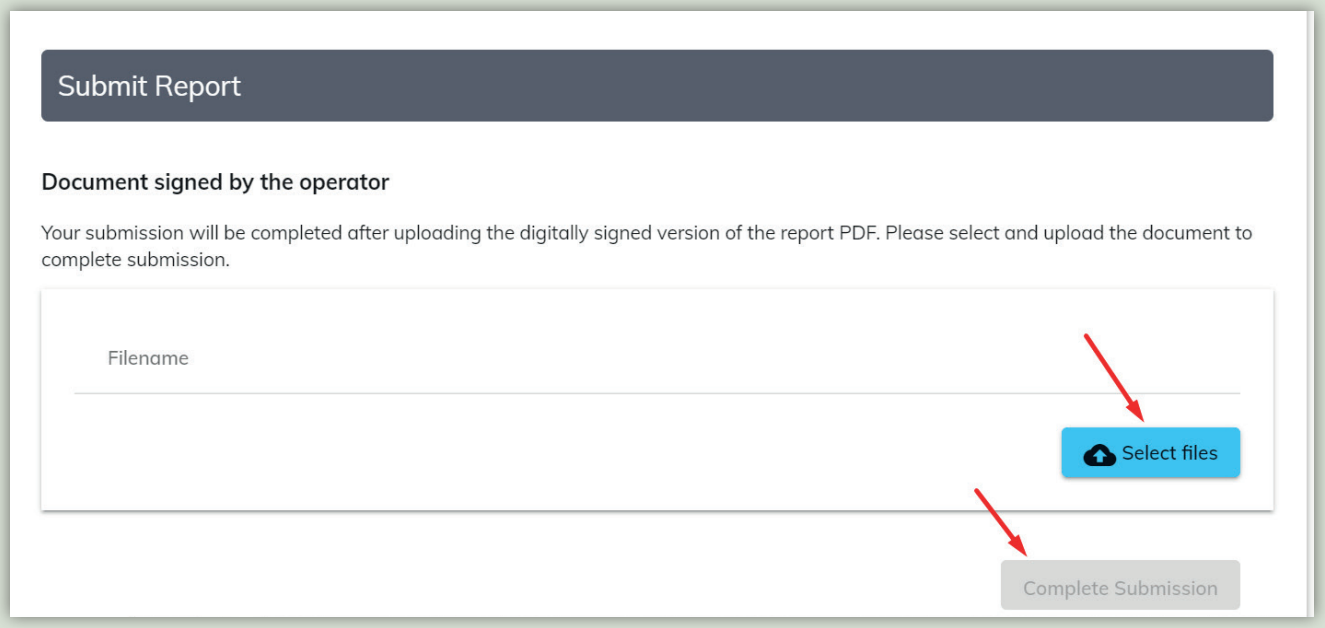
6.5.4 Submission

After the Verification Body verifies the Emissions Unit Cancellation Report and uploads an e-signed PDF output of the relevant Verification Report to the system[12], the Aeroplane Operator must upload the verified Emissions Unit Cancellation Report to the system, to be submitted to the opinion of the DGCA. To this end, the Aeroplane Operator must first generate - over the Data Management System - a PDF output of the Emissions Unit Cancellation Report and then upload an e-signed copy of that output to the system - again over the DMS (Figure 64 ve Figure 65).

12 When the Verification Body uploads the Verification Report to the System, Status of the Emissions Unit Cancellation Report will be updated as "Verified".

Figure 64: Generating a PDF output of the Emissions Unit Cancellation Report

Figure 65: Uploading the Emissions Unit Cancellation Report to the system



6.6 Verification Reports Module

Verification Reports Module is a module open for access only by accredited Verification Bodies, within the Data Management System. Verification Bodies can perform the following actions over the Verification Reports Module:

- Accepting the Verification Body assignments by Aeroplane Operators for the Verification Bodies themselves and creating a user account
- Accessing the Emissions Reports prepared by Aeroplane Operators (Domestic and International) and evaluating those reports
- Accessing the Emissions Unit Cancellation Reports prepared by Aeroplane Operators and evaluating those reports
- Re-opening for access by Aeroplane Operators the Emissions Reports and Emissions Unit Cancellation Reports that are found non-satisfactory
- Verifying the Emissions Reports and Emissions Unit Cancellation Reports that are found satisfactory

How does a Verification Body log in the DMS?

A Verification Body that will operate for the first time under the DMS should be introduced to the system by the Aeroplane Operator, which performs the aviation activities to be subject to a verification process, as described in the 4.3 Emissions Reports Module. Once the Verification Body is introduced to the system, an e-mail with the user password required to log in the DMS is sent to the e-mail address of the Verification Body (Figure 45). The Verification Body can log in the system by using the password sent in that e-mail and the e-mail address. The e-mail address which was introduced to the system as the username and to which the password was sent should be entered (Figure 66).

Figure 66: Account activation e-mail sent to the Verification Body by the DMS

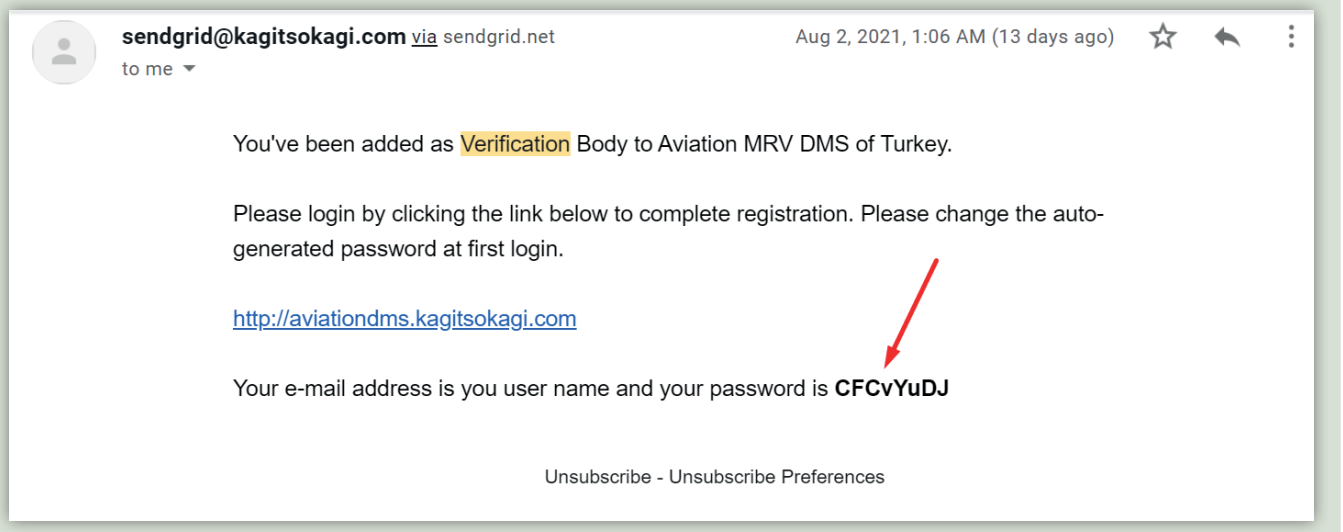
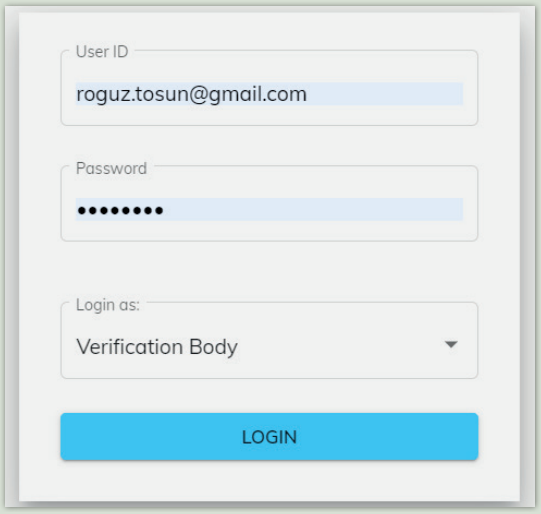


Figure 67: Logging in with a Verification Body Account



This module consists of the 2 main sections listed below:

1. Introduction Section: Numbers of the Verification Reports that were completed on the home page of the Verification Report and that are in the preparation phase (Figure 68), as well as the identity details of the Verification Body (Figure 69).

Figure 68: Home Page of the Verification Module – Number of Verification Reports

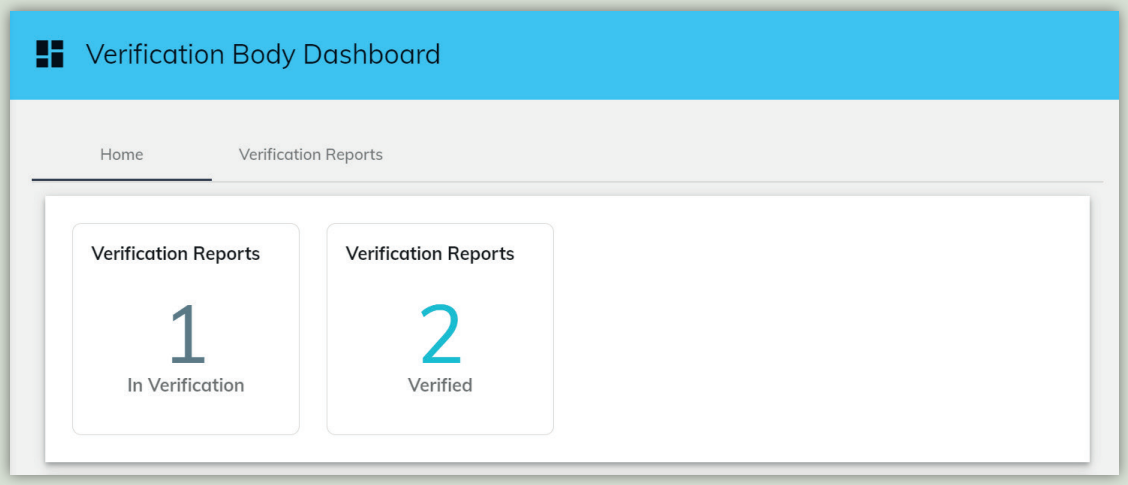
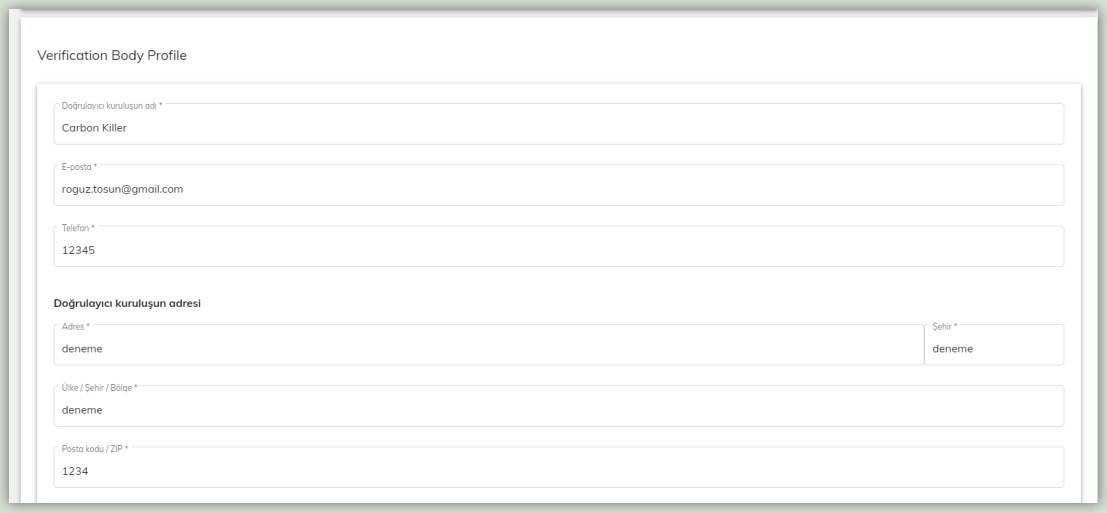


Figure 69: Home Page of the Verification Module – Identity details of the Verification Body



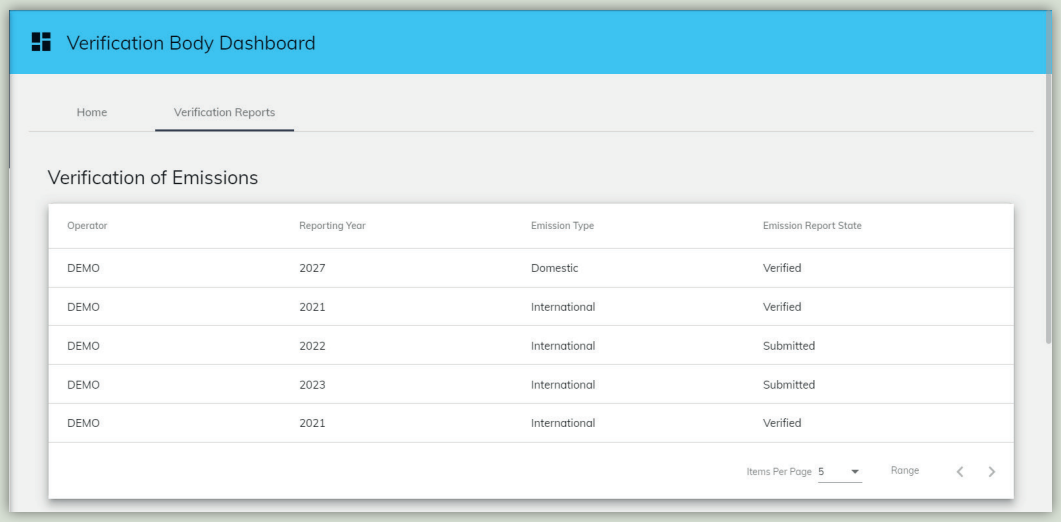
Verification Reports Section: Emissions Reports and Emissions Unit Cancellation Reports are listed following the information on:

- Aeroplane Operator
- Reporting Year
- Compliance Period
- Emission Type
- Report (verification) Status

in the Verification Reports Section (Figure 49). By clicking on the documents listed in the Verification Reports Section, the Verification Body can;

- Obtain information about the final versions of the verification reports or
- Continue the verification process.

Figure 70: Verification Reports Section

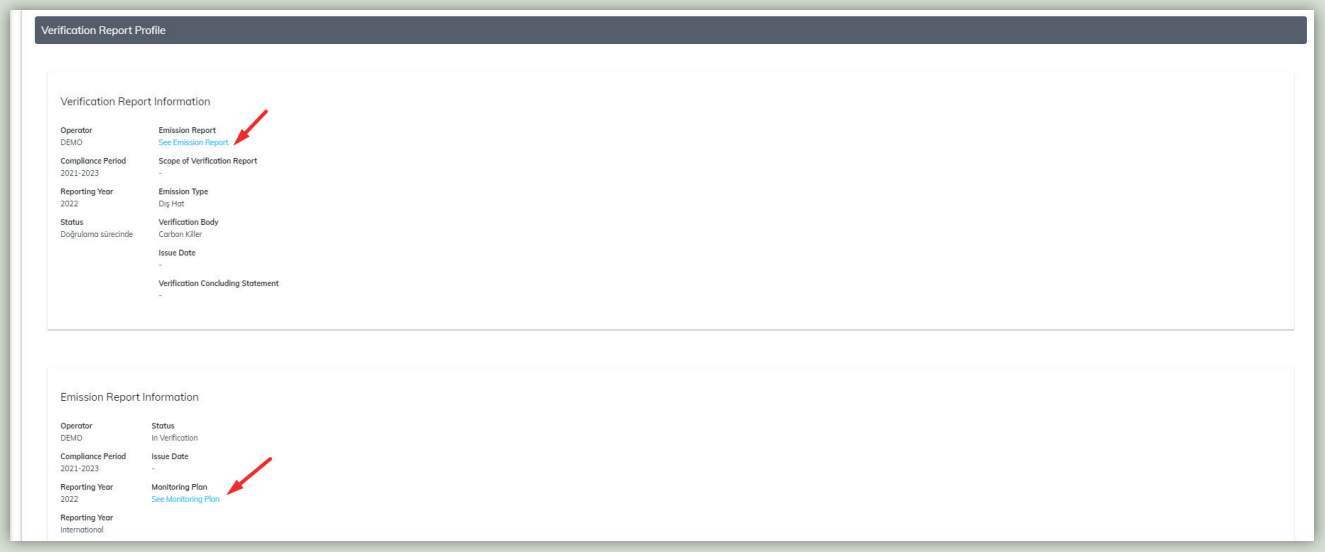


When a Verification Body is assigned by an Aeroplane Operator for the verification of any Emissions Report or Emissions Unit Cancellation Report, the Status of that report will appear as “In the process of verification” in the Verification Reports Section.

6.6.1 Verification of Emissions and Unit Cancellations

When the Verification Body will reach the sub-sections of the Verification Report Profile and Scope of the Verification Report, on the page that opens by clicking on the Emissions Report and the Emissions Unit Cancellation Report subject to verification. In the sub-section of the Verification Report Profile, the Verification Body can view the Emissions Unit Cancellation Report, the Emissions Report and the Monitoring Plan associated with those reports (Figure 50). Moreover, the Verification Body should make an appropriate choice according to the section of the relevant emissions report (containing or not containing CORSIA eligible fuels), from the list that opens up in the sub-section “Scope of the Verification Report”.

Figure 71: Verification Profile

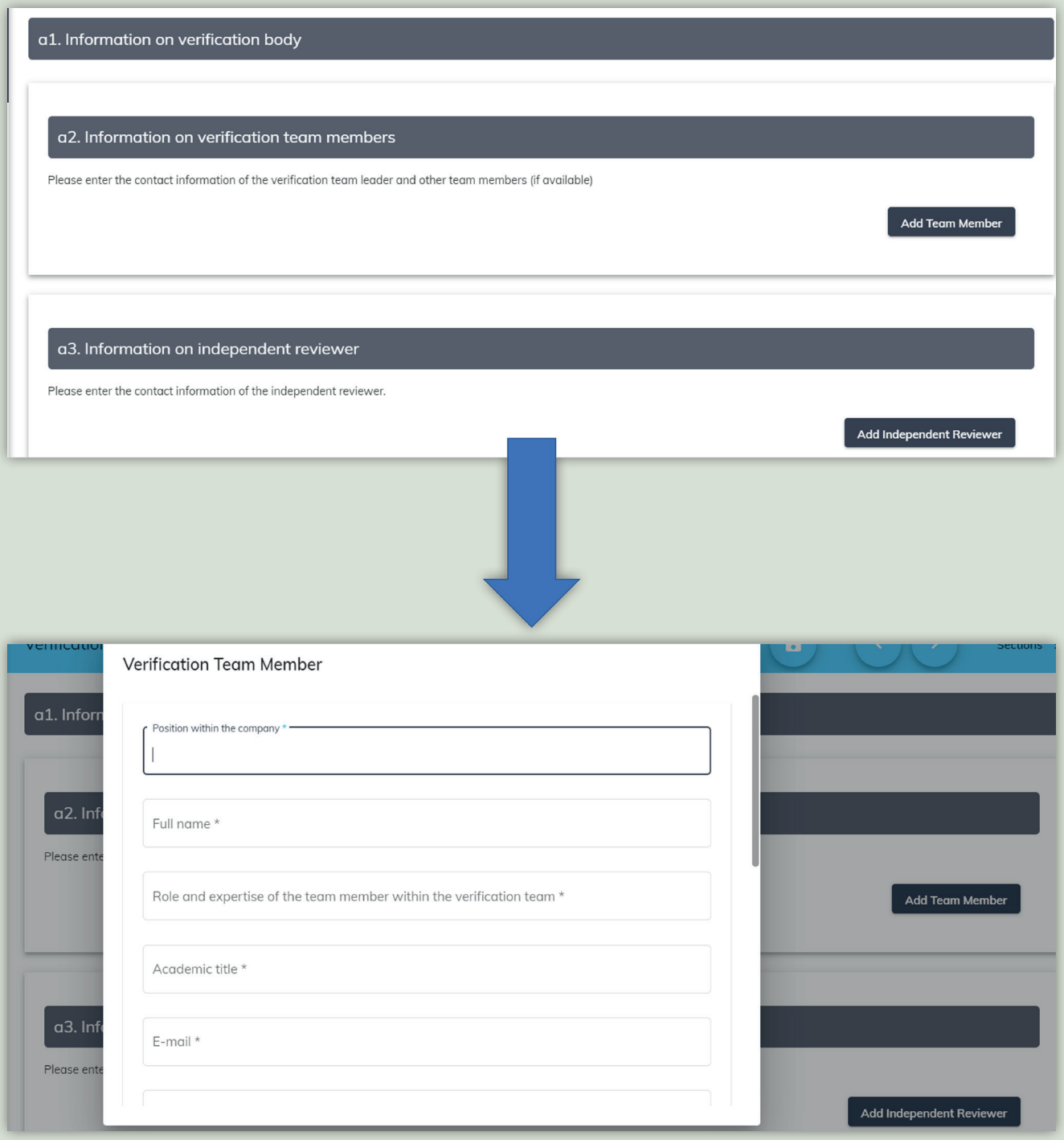


After selecting the scope of the verification report, the Verification Body should fill in and complete the following sections following the type and content of the Emissions Unit Cancellation Report or the Emissions Report, for the Verification of Emissions:

- Introduction
- Time Allocation
- General Information
- Process and Analysis
- Final Verification Statement
- Submitting the Report

Information on the Verification Team Leader and the Independent Auditor should be entered in the sub-section “Introduction”. If the contact information of the Verification Team Leader is different from the User information, the relevant address details should be provided in the section “a2. Information on the Verification team members” (Figure 72).

Figure 72: Entering the Verification Body Details



More than one Independent Auditors can be added in the a2 section.

After completing the Time Allocation, General Information, and Process and Analysis sections, the User should complete the Final Verification Statement to submit the results of the verification action.

In the Verification Statement section, the User should fill in; the "Results of the independent audit" sub-section by filling in the relevant open-ended answer box (); the "Final Verification Statement" sub-section by selecting one of the following options in compliance with the result obtained throughout the verification action ():

- **Verified as satisfactory:** If this option is chosen, it means that the relevant report is verified. After this verification report is delivered, the relevant Aeroplane Operator can submit the verification report and its associated report (the Emissions Report or the Emissions Unit Cancellation Report) to the opinion of the DGCA.
- **Verified as satisfactory with comments:** If this option is selected, the User fills in a new sub-section titled "Satisfactory with comments" and clarifies, separately, the "misstatements" and "nonconformities" detected in the relevant report. After this verification report is delivered, the relevant Aeroplane Operator can submit the verification report and its associated report (the Emissions Report or the Emissions Unit Cancellation Report) to the opinion of the DGCA.
- **Verified as non-satisfactory:** If this option is selected, the User fills in a new sub-section titled "Non-satisfactory" and describes the reasons behind why this report is non-satisfactory, by choosing one or more of the following options:
    - There are material misstatements and/or material nonconformities.
    - Scope of verification is highly limited.
    - The Verification body is not sufficiently assured about the data.

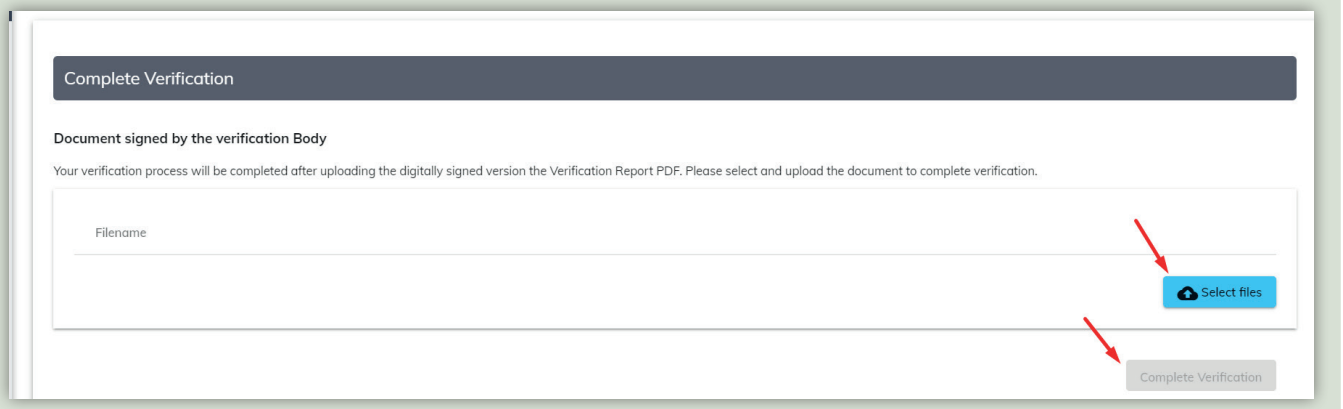
In addition to the above reasons, if there is any other information the User wants to add to the report and its content, the User can include such argument in the content of the verification report by using the "Other remarks" section. After this verification report is delivered, the relevant Aeroplane Operator cannot submit the verification report and its associated report (the Emissions Report or the Emissions Unit Cancellation Report) to the opinion of the DGCA. The verification process continues until the reasons shared in this section, which make the report non-satisfactory, are eliminated.

6.6.2 Submitting the Verification Report

After the Verification Body produces the Verification Report, the report must be uploaded to the system, to be submitted to the attention of the Aeroplane Operator. To this end, the Aeroplane Operator must first generate - over the Data Management System - a PDF output of the Verification Report and then upload an e-signed copy of that output to the system - again over the DMS (Figure 73 ve Figure 74).

Figure 73: Generating a PDF output of the Emissions Report

Figure 74: Uploading the Emissions Report to the system



Abbreviations

BMUB	Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
CA	Competent Authority
DMS	Data Management System
GDEM	General Directorate of Environmental Management in the Ministry of Environment and Urbanization
GDEIA	General Directorate of Environmental Impact Assessment in the Ministry of Environment and Urbanization
GHG	Greenhouse Gas
GIZ	Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH German International Cooperation
IKI	Internationale Klimaschutz Initiative International Climate Initiative
MoEU	Ministry of Environment and Urbanization of Turkey
MRV	Monitoring, Reporting and Verification
NDC	Nationally Determined Contributions

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REPUBLIC OF TURKEY
MINISTRY OF ENVIRONMENT,
URBANIZATION AND CLIMATE CHANGE

On behalf of:

Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

of the Federal Republic of Germany

Implemented by

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

This project is part of the International Climate Initiative (IKI), The German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) supports this initiative on the basis of a decision adopted by the German Bundestag

REPUBLIC OF TURKEY
MINISTRY OF TRANSPORT
AND INFRASTRUCTURE

DHMI DGCA
DIRECTORATE GENERAL OF
CIVIL AVIATON
TURKEY

This guideline is prepared under the framework of the Project in coordination with the Directorate General of Civil Aviation - Republic of Turkey Ministry of Transport and Infrastructure.

Republic of Turkey
Ministry of Environment, Urbanization and Climate Change
Directorate of Climate Change