Welcome to your CDP Climate Change Questionnaire 2022

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

ASELSAN is the face of technology in Türkiye for decades and an inspiration for the manufacture of electrical /electronic equipment since its establishment in 1975.
ASELSAN's vision is being a national technology company that maintains its sustainable growth by creating value in the global market; preferred due to its competitiveness, trusted as a strategic partner, and caring for the environment and people.
Today ASELSAN is a world class brand in expanding systematically into the local and global markets, with over 2.2 Bio USD in revenue and almost 9460 employees. ASELSAN has become a high technology, multi-product defense electronics company by introducing state-of-the-art equipment and systems solutions for both military and professional applications in 3 continents over 78 countries.
ASELSAN is a technology provider not only for the military but for the life and the environment. Beside defense technologies, ASELSAN has a wide range of scope in the technology areas such as public safety, transportation, health, energy and automation systems, communication and high-end agricultural technologies. In addition to contributions to the national technological needs in line with the mission, ASELSAN also creates value for its customers and partners with its exports.
ASELSAN operates under five business sectors:
• Communications and Information Technologies Business Sector (HBT): Tactical Radios, Tactical Area Communication Systems, Avionic, Satellite and Naval Communication Systems, Public Safety Communication Systems
• Radar, Electronic Warfare Business Sector (REHIS): Radar Systems, Electronic Warfare Self Protection Systems, Electronic Warfare Intelligence and Attack Programs
• Defense Systems Technologies Business Sector (SST): Weapon Systems, Command Control (C4ISR) Systems, Naval Combat Systems, Air and Missile Defense
• Microelectronics, Guidance & Electro-Optics Business Sector (MGEO): Electro-Optic Systems, Guidance & Unmanned Systems, Avionic Systems, Microelectronics
• Transportation, Security, Energy, Automation & Healthcare Systems Business Sector: Transportation Systems, Security Systems, Traffic and Automation Systems, Energy Systems, Homeland Security Systems, Healthcare Systems (UGES).

ASELSAN maintains engineering operations in Ankara, production and engineering operations in Macunköy, Akyurt and Gölbaşı. Headquarters are located in Ankara Macunköy. Some management offices are located in Istanbul Teknopark.
The Macunköy Facility was established over a total area of 186,848 m2. ASELSAN's headquarters are located in Macunköy Facility as well as Communications and Information Technologies Business Sector and Defense System Technologies Business Sector and Transportation, Security Energy Automation and Healthcare Business Sector. The Akyurt Facility was established on a total area of 635,309 m2. The Microelectronics Guidance and Electro-Optic Business Sector is located in the ASELSAN Akyurt Facility. The Gölbaşı Facility was established in the Gölbaşı district of Ankara, and houses production plants for radar and electronic warfare systems for land, air, sea, space and unmanned platforms. This Facility was established on a total area of 665,802 m2.
Teknokent (ODTU- Titanium) offices and Akyurt 2 facility were included in the boundaries in 2020.
Decreasing carbon emission is the most important strategic goal for ASELSAN. Carbon emission is monitored since 2009. In 2021, ASELSAN got A- scores in Climate Change Supply Chain Management and Water Security CDP Projects, it has decreased carbon emission significantly through its efforts, and continues its operations by increasing momentum in the fields of increasing energy efficiency in production, giving priority to production technologies that decrease carbon emission, switching to use of energy that does not cause carbon emission. Macunköy, Akyurt and Gölbaşı Facilities obtained the ISO 50001:2018 Energy Management System Certificate in April 2021 for all energy resources, and without any major or minor findings.
The GHG reporting boundaries mapping was achieved in 2021 and in April 2022, ISO 14064:2018 GHG Management Systems transition was carried out successfully.
As a result of corporate governance rating activities carried out by an independent rating agency, SAHA in 2021, ASELSAN increased its score from 9.29 out of 10 on 11.12.2020 to 9.35 on 10.12.2021. ASELSAN became the leader of Türkiye's most valuable brands by increasing its brand value by 65.7%. In the brand rating, the Company increased its score from AA in 2020 to AA+ in 2021.
According to Turkish Time's "R&D 250 - Companies with Highest R&D Spending in Türkiye" Survey conducted on the basis of data for 2020, ASELSAN was the company with the highest R&D spending with its investments of TRY 5 billion 615 million in 2021.
ASELSAN won the "Special Award" in "Big Stars" category that lists technology companies with revenues of EUR 50 million and above.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Reporting year	January 1, 2021	December 31, 2021	No

C0.3

(C0.3) Select the countries/areas in which you operate.

Turkey

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

TRY

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	TREASLS00018
Yes, a Ticker symbol	ASELS

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain

Chief Executive Officer (CEO)	The Board Chair who has been assigned as CEO as of April 27, 2018; has a direct responsibility for climate related issues on behalf of the Board and EC. The CEO also has an execution responsibility in the field of social responsibility and environment. The Board considers climate-related issues when reviewing and guiding the business strategy aligned with the economic performance of the company. Following the Strategic Plan, the Board carries out oversight power on Sustainability Committee Program integrated with climate related issues impacting economic, social and environmental performance of the company. In order to conduct its responsibilities ASELSAN Board of Directors formed three committees: Audit Committee, Corporate Governance Committee, Early Detection and Management of Risk Committee. The third one is comprised of three Board Members who ensure the determination of the operational, strategic, financial and other climate related R&Os. ASELSAN CDP Execution Group was established in 2019. This group is working under the presidency of Corporate Management Vice President who is a member of Executive Board. The group's goal is to carry out science-based target studies and strategy review with scenario-base analyses. In this group there is one representative from each sector chair, including financial affairs and strategy department. Energy reduction projects that will serve as a basis for setting targets are also reported to the same group. In the reporting year, the Corporate Management Vice President started to assist the Board of Directors in fulfilling oversight of CDP related issues with the collaboration of ERM within the organization. In 2020, Climate Change Management Unit (CCMU) has been established under the roof of Integrated Management Systems. The Unit works with all facilities' leaders to drive an integrated, enterprise-wide management on climate issues. In line with the 2053 net zero emission vision of Türkiye, in the reporting year ASELSAN started to take an active role in the workshops that will draw up Türkiye's road map on climate change. As a representative of its field of business, ASELSAN carries out studies in working groups in partnership with the related authorities.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action	The Board reviews and guides climate related risk management policies as scheduled. The Corporate Management Vice President who leads the Sustainability Committee, briefs the Executive Committee (EC) of ASELSAN about

	Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	climate related developments and practices by bringing the attention of the EC to social, legal and environmental R&O's that may have an impact on the Risk Management Policy of the Company. The CEO and the Board of Directors oversee policy by considering global climate related issues, government relations and corporate responsibility including reviewing and providing oversight of the Company's Environmental Sustainability Program. The board considers also climate-related issues when reviewing and guiding the whole business strategy, plans, risk management policies, budget plans as well as, setting organizational performance objectives, monitoring implementation and performance, and overseeing major capital expenditures, acquisitions and divestitures. In 2021 the following decisions and actions were carried out for addressing climate-related risks and opportunities. 1- Consistent decisions were made regarding the transition plan to be prepared ensuring to facilitate emission reduction target by 2050. Emission reduction actions which will take part in the Climate Transition Plan were discussed in the first Sustainability Workshop organized with the presidency of the CEO. Chairman/ CEO and ASELSAN's Sustainability Ambassadors attended the workshops under the main topics of ESG. 2- It has been decided to allocate sufficient budget for 14064:2018 certification carried out in 2022. For the purpose to provide suppliers' emission information and communication in most efficient way, supply chain emission inventory software was established. 3. The coordination of energy reduction activities among the teams was ensured for the planning and implementation of mandatory activities for certification, including Internal Audit, External Audit, and Management Review. It was decided to perform surveys and organize contests to raise awareness within the company about the Energy Management System, to conduct interactive communication with employees, and to carry out projects for sharing good practices. For the replacement of inefficient electric motors, a renovation base planned budget has been allocated. 5. For the purpose to collect data and gain experience for creating the passenger car fleet from

		electric/hybrid vehicles in 2023, it was decided to start to use 3 electric and 7 hybrid vehicles in the passenger car fleet for the year 2021. 6-Visible Leadership activities continued in 2021. Monthly environment related field visits were performed with the relevant Vice President or the Chairman of the Board of Directors and employees. 7- Within the scope of the Antarctic Agreement, the scientific team conducting research in the fields of climate, water and biodiversity in Antarctica, was supported with ASELSAN's technologies.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues
Row 1	Yes	In ASELSAN; the members of the board are competent in different fields. The criteria used to assess competence of board members is: Academic background or business proficiency on climate/ energy/ environment related projects & tasks. These capabilities will ensure the company's commitment to understand and respond to risks, opportunities, and impacts within its highest decision-making body. The Board-Chair of ASELSAN has a competence on climate-related issues, he can fulfill any plans to address board-level competence as a whole. The board-chair has served as the chairman of Control and Automation Engineering Department in Yıldız Technical University, between the years 2009-2013. During his chairmanship, he has been the founder of many postgraduate programs. He served as the Türkiye Delegate of European Union 7th Framework Program Energy Field in between the years 2007-2010. He carried his duties as a Board Member of Yıldız Technical University Techno-park, BAP Coordinate, Science Application and Research Center, served as the Editor of YTU Sigma Engineering and Science Journal between 2010-2013. He also carried his duties as Yıldız Technical University Deputy Manager of the Institute of Science and Vice Rector. He has numerous national and international articles / reports, editorial editions and projects. He was elected as the Rector of the Year in 2015, 2016, 2017 and 2018 in organizations organized by different institutions due to his pioneering contributions to university-industry cooperation during his rectorate. As an electrical engineer he

		was actively involved in energy efficiency and energy saving methods. Some International Articles of the Board Chair/CEO 1-A Nonlinear Observer Design for Fuel Cell Hydrogen Estimation 2-An algorithm for estimation of membrane water content in PEM fuel cells (2005) 2-A Voltage-Based Observer Design for Membrane Water Content in PEM Fuel Cells

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

The direct responsibility for climate change within ASELSAN lies with Executive Committee presided by the CEO representing also the Board Chair.

The CEO informs the board of directors who oversight the company performance on climate related issues. The Board assigns strategic and program management responsibility to related board committees. ASELSAN's Board of Directors formed following committees to ensure the communication based integrated management of risks & opportunities.

Audit Committee is comprised of three independent Board members. Its main duties are to ensure disclosure of the financial data and to oversee the functioning and effectiveness of the accounting, independent audit, internal audit and internal control systems of ASELSAN.

Internal Audit Presidency's main duties are to ensure the follow-up of enterprise risk management system aligned with ASELSAN's strategy, politics and other processes. It oversees the functioning and effectiveness of the risk management system processes. Internal Audit Presidency reports directly to Audit Committee and Board of Directors. The committee assembles at least four times a year.

Early Detection and Management of Risk Committee (EDMR) is comprised of three Board members. It is chaired by an independent Board member. Committee ensures the determination of the operational, strategic, financial and other climate related risks and those risks are managed in compliance with company's enterprise risk-taking profile. The Committee assembles at least six times a year. It oversees the performance of the enterprise risk management system.

Enterprise Risk Management Coordination Council is responsible to assign a risk representative who has the duties to prepare risk detection and management documents and to make the coordination of related activities which are reported to EDMR Committee. ASELSAN's vision is to be the national defense industry company by maintaining its sustainable growth with creating value in the global market and to be preferred due to its competitiveness, to be trusted as a strategic partner, and to care for the environment and people. In line with this vision, the Company prepares five-year strategic plans that are updated every year, as well as operational plans and three-year budgets. Through this method, the Company's short- and mid-term targets are determined by taking long-term targets into account with resource planning, process improvement and other development activities. One of the EC core members who is the Vice President of Shared Services presides the Sustainability Committee (SC) for sustainability and climate related actions.
In 2021 for the first time, the SC meetings were presided by the CEO/Board Chair for all climate related issues. ASELSAN organized the first Sustainability Workshop covering climate related topics with the participation of the Senior Management and Sustainability Ambassadors. The CEO presided this workshop.
The SC develops and implements economic, environmental and social sustainability strategies focusing on responsible consumption and production by setting targets to reduce the impact of identified risks and making performance reviews. The seize of identified opportunities are also discussed in this committee.
The Corporate Management Vice President is the authorized person who drives and adapts climate related decisions of the company. The activities are executed by the following positions in the SC: Management Director of Infrastructure and Facilities who performs energy related legal and operational issues in the operational field.
Finance Director, Strategy Management Director, Investors Relations Manager, Enterprise Risk Management Manager, Supply Chain Management Vice President provide all guidance on their own expertise about climate management issues by reporting to Vice President.
Climate Change Management Unit (CCMU) established in 2020 by Integrated Management Systems, works with all facilities' leaders to drive an integrated, enterprise-wide management that includes the products, services, processes, operations, subsidiary suppliers, contractors and employees has been established under the roof of Integrated Management Systems (IMS) within the leadership of its manager. The Unit works with all facilities' leaders to drive an integrated, enterprise-wide management that includes the products, services, processes, operations, contractors and employees
IMS ensures to drive the calculation of carbon footprint value of the facilities annually in compliance with ISO 14064:2018, making notifications to national/international initiatives in connection therewith. The information forming, based on climate related R&Os are updated first by the IMS position. With the collaboration of internal control manager, the risk mapping is updated for identifying the potential risks of flooding and storms, but also the consequences of these events: environmental, property damage, impact on the business.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	The “Performance Development and Feedback System (PGSS),” which was implemented in 2020, is designed to strengthen goal-based performance management and feedback culture. The goals for all organizational units have been mutually determined in alignment with corporate goals. The PGSS is tracked on a software infrastructure to identify employees’ career management, remuneration, and rewarding processes. The system aims to encourage the motivation to achieve together and the employee performance is evaluated in four different dimensions. The final performance evaluation of the employee consists of the evaluation of the goals defined for the employee by the manager, the evaluations of the employee’s colleagues/ internal customers regarding their contribution in the projects they worked together, and the ratio of the target realization status of the higher and two times higher organizational units of the department to which they are affiliated, based on certain weights.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Chief Executive Officer (CEO)	Monetary reward	Emissions reduction target Energy reduction target Efficiency target Company performance against a climate-related sustainability index	The CEO carries out performance assessments and decisions in line with support to Sustainability and CDP Reporting. Performance of the activities’ incentive metrics is reported to the Board of Directors and factor into executive compensation through the Balanced Scorecard Method.
Other C-Suite Officer	Monetary reward	Emissions reduction target Energy reduction target Efficiency target	The Corporate Management Vice President carries out performance assessments and decisions in line with support to Sustainability and CDP Reporting. Performance of the activities’ incentive metrics is reported to the Board

		Company performance against a climate-related sustainability index	of Directors and factor into executive compensation through the Balanced Scorecard Method.
Environment/Sustainability manager	Monetary reward	Emissions reduction project Energy reduction project Efficiency project Behavior change related indicator Environmental criteria included in purchases Company performance against a climate-related sustainability index	Performance indicators cover CO2 emission reduction, energy and natural resources consumption reduction, support for Sustainability and CDP reporting. And these indicators find place as a target in the Balanced Score Card Method. The corporate and personal performance is evaluated through the Balanced Scorecard Method and the realization scores has a direct impact on the salary increase. The PGSS strengthen goal-based performance management and feedback culture.
All employees	Monetary reward	Emissions reduction target Energy reduction project Efficiency target Behavior change related indicator	In ASELSAN, there is a suggestion system called “Idea Management System” in the intranet since 2013. This system is accessible for all employees. An employee who has an innovative idea on climate change, energy efficiency or improvement on water and any other topic, can send his/her idea note to the Strategy Department through this suggestion system. The Strategy Department evaluates the idea and if it is feasible, the idea note is shared with the related department. The employee is entitled with a monetary reward if the idea is assessed to be applicable and profitable for the company. If the proposal results with an emission reduction the reward is 3 gold coins. Other rewards: 1-The congratulatory message for the World Water Day was shared with all

			ASELSAN members by the Vice President of Corporate Management. With the congratulatory message including detailed information on water consumption, an awareness competition was initiated. Winners of the competition were given aerator as a gift to help people save water in their homes and reflect this awareness to their families. 2- Ecological Touch on Smart Cities. With the joint work of ASELSAN and Ankara Provincial Directorate of National Education, a painting competition with the theme of “Ecological Smart Cities” was held within the scope of World Environment Day. In the competition held on the ASELSAN Techno Adventure platform and attended by the 5th, 6th, 7th and 8th grade students of primary and secondary schools in Ankara, children had the opportunity to draw the future of smart cities by depicting their dream flying cars, moving roads and hospitals managed by robots. 3-Water’s Future Project Competition Organized under the leadership of the Presidential Human Resources Office, the competition was launched with the main theme of mobilizing technology for a livable world. Total 125 teams participated in the competition and uploaded their projects to the system through the talent gate. The top 3 teams were given a monetary award and also allowed to participate in the half-day sustainability training organized by ASELSAN.
All employees	Non-monetary reward	Behavior change related indicator Company performance against a climate-related	Other events and activities: 1-EYS Cup; This is a traditional competition, held between the Vice Presidents, every year. The environment/climate related criteria for the relevant year are determined in January. The Sector Presidencies are

		sustainability index	assessed based on these criteria and a winner is chosen at the end of the year. The Cup is presented to the winner at the Executive Board meeting by the Chairman of the Board of Directors/CEO, and the cup is displayed at the relevant offices throughout the year. Among the criteria, there are items such as the rate of participation in climate change education, the rate of making improvement suggestions on environmental issues such as energy, water, wastes. 2-Visible Leadership activities are held every month for managers to participate in climate change and environmental management, to see the work on the field, to communicate with employees on these issues and to get their opinions. Every month, a field visit is made with the relevant Vice President or the Chairman of the Board of Directors/CEO, and climate change and environmental studies are observed with a wide participation with employees. 3-The scope of the Zero Waste Initiative introduced in the last quarter of 2019 at ASELSAN facilities was expanded and awareness-raising practices performed in 2021. Waste Coordinators have been assigned to the facilities for the inspection and improvement of the implementation of the Zero Waste principles. 4- ASELSAN undertook the duty of jury in the project competition themed "The Future of Water" organized under the leadership of the Presidential Human Resources Office.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	5	Major global, national and enterprise risks and opportunities which have potential impacts on our operations and life of our assets according to the profile of the climate related risks that we may face are considered in 5-year period for short-term time horizon.
Medium-term	5	10	Major global, national and enterprise risks and opportunities which have potential impacts on our operations and life of our assets according to the profile of the climate related risks that we may face are considered in 10- year period for medium-term time horizon.
Long-term	10	30	Major global, national and enterprise risks and opportunities which have potential impacts on our operations and life of our assets according to the profile of the climate related risks that we may face are considered in 30 years period for long-term time horizon.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

At ASELSAN's practice; there is a great bonding between Corporate Strategy and Enterprise Risk Management system. We believe this understanding contributes positively on ASELSAN's sustainability. In this approach; every risk factor that could be an obstacle by meaning of achieving ASELSAN's goals, are being defined. In risk assessment phase ASELSAN applies a risk matrix where risks are placed by their impact and likelihood. This is a 5x5 matrix and the impact degree is ranged from Very Low to Very High. Furthermore; to evaluate, to monitor and to diversify the risks better, every risk is categorized under 4 components (Financial, Operational, Compliance and Strategic).

Environmental risks that have a significant financial or strategic impact (i.e rated "very high" and have an EBITDA impact of over TL 1,400 million) are reported to the Early Detection and Management of Risk Committee every two months, which is then sent to the ASELSAN Board of Directors.

Each environmental risks are evaluated according to impact and probability criteria. The probability and impact of the risks are scored (1-5 points).
Criticality levels are “very low” (less than TL 56 million effect on EBITDA) "low" (effect on EBITDA between TL 56 and 280 million), "medium" (effect on EBITDA between TL 280 and 560 million), "high" (between 560 and 1.400 million TL effect on EBITDA), " very high" (over TL 1,400 Million impact on EBITDA).
In order to minimize and prevent from the impacts of climate change; yearly a very comprehensive insurance policy is being taken by ASELSAN. Risks such as; snowstorm, tornado, flood (increase in severity and frequency of extreme weather events) are some of the subjects of this policy, moreover every employee and ASELSAN’s all facilities are fully covered.
Financial risks and non-financial risks that can significantly have an impact on our business objectives or financial condition vary in different conditions. Based on our context of risk assessment procedure, the substantive risks can be measured depending on assessment factors; impact of occurrence and size of potential impact. In case to find out whether the issue is a significant risk or not, we conduct a risk assessment according to these criteria to prioritize the risk. The assessment method is applicable for every risk.
ASELSAN defines substantive potential impact on its business as the change to operations and cost and considers reputation risks having negative impact on company’s own business, operations, revenue, profitability and overall market value in Borsa Istanbul.
Sustainability and environment friendly practices are gaining more and more importance all around the globe. The investors’ approach to companies’ such practices is also evolving accordingly. As days pass by, the number of corporate funds which are including sustainability as a separate parameter to their evaluation criteria and even investing only to firms with high ESG scores are increasing. Our efforts on climate change mitigation will help ASELSAN positively differ from other publicly traded companies on the eye of current and prospective investors. Taking these concerns into account, we consider the most important aspect of climate change that influences the strategy as the opportunity to develop a green business. **From this point of view, ASELSAN foresees climate change not only as a risk factor but also as an opportunity for widening its environment friendly solutions, as ASELSAN is a technology company.**

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

ASELSAN's Enterprise Risk Management Policy aims to ensure that appropriate actions are taken against all uncertainties that threaten the corporate existence of the Company. The corporate identity of the Company and the interests of all its stakeholders are protected under all circumstances. Risk management is an integral part of corporate governance. At ASELSAN, the information produced within the scope of risk management activities is integrated into decision mechanisms. “Top-down” and “bottom-up” approaches are applied together in Enterprise Risk Management studies, risks that may affect ASELSAN's achievement of its goals are identified, evaluated, monitored and reported together with the risk reactions and the measures to be taken. At ASELSAN; The Enterprise Risk Management process is regularly reviewed and improved.
At both company and asset levels, climate change related risks and opportunities include, changes in fuel and energy prices, climate related laws and regulations, global competitiveness, changing customer needs and suppliers’ profile, potential threats of national security and employee related issues. The climate related risks and opportunities at the company level are assessed by the Sustainability Committee. Risks and opportunities associated with the environment or climate change are often coupled with energy-related activity and are subject to our Risk & Opportunity Evaluation Process. The Strategy Department in coordination with the Sustainability Committee is responsible of setting targets to reduce the impact of identified risks and making performance reviews to assess whether the climate related targets are met and also decides on how and when the identified opportunities can be seized. Sustainability Committee and the Early Detection and Management of Risk Committee review and finalize all climate related risk analysis and present the critical risks that are assessed to be of “High” importance to the Board of Directors according to the scoring methodology defined below. They also present a report to Board of Directors about the financial and operational measures that need to be taken by ASELSAN to prevent the occurrence of the identified risks. The Board of Directors decides which measures shall be applied and the evaluations are then reported to the Early Detection and Management of Risk Committee to be monitored and brought into action.
Additionally, when the relative significance of climate-related risks is determined by the strategic decision makers after a comparable structured review, they are itemized as implementation plan within the scope of ISO 14001:2015 for a detailed assessment and planning.
The risks are first analysed at the facility and activity level as compliance risks, project risks, operational risks, management and adaptation risks. These are assessed according to the methodology given as process(es) for managing climate-related risks and opportunities. The identified risks are then classified to be; very low, low, medium,

high and very high (critical). The results of the evaluation are reported to the EC, which in turn makes decisions. ASELSAN's overall risk management objective is to reduce controllable risk impacts and minimize the impact of the ones that cannot be controlled. We analyse short, med and long-term risks and opportunities having the potential of substantive strategic and financial impact on the organization.
We define substantive financial impact; as risks with a threshold over TL 1,400 Million impact on EBITDA.
Process(es) for managing climate-related risks and opportunities: The major climate related risks and opportunities at the asset level are the events that may have a major impact on the GHG emissions which may trigger compliance risks.
These events usually are related to energy and fossil fuel consumption.
Renovations in product design enabling less energy consumption are assessed as an opportunity, and increased consumption of fossil fuel during production is assessed as a major climate related risk.
The process is described as follows: First, the probability of occurrence of the identified risk is scored from Very Low to Very High occurrence. Then, the impact of the identified risk event is also determined from Very Low to Very High.
According to final score the risks and opportunities are prioritized from Very Low to Critical. If the assessment result is Critical, the company establishes a response plan and implements the response and regular monitoring.
The responsible who identifies first the risk and/or opportunity, tracks the actions. Communication with the risk manager is always setup within a defined official time frame. Climate Change Management Unit carries out the coordination, reporting and monitoring processes of all climate engagement activities across business divisions and external official institutions and organizations.
The Integrated Management Systems Manager also involves to operations, actions and status tracking for climate-related R&O. The opportunities are evaluated by related department, with the above-mentioned team survey and reported to the Board of Directors. If there are new opportunities detected for med-term and long-term time horizon, they are integrated in the annual budget planning.
Loss of productive labor force as a consequence of health problems caused by environment and climate related problems ending by facility shut-off, is an example of physical risk assessment realized by ASELSAN's IMS department. COVID-19, which has affected our country and the whole world, has been at the center of the ASELSAN's Enterprise Risk Management System. In order to reduce the impact of the epidemic, measures covering all internal and external stakeholders were implemented at ASELSAN. In addition, all possible effects of the epidemic on ASELSAN's strategic goals, operations, financial situation, and all applicable laws and regulations were evaluated through scenario-based analyses.
Another example of transition risk is to make some additional modifications in the performance parameters of designed products as a consequence of climate related conditions. (Specific confidentiality constraints prohibiting the disclosure)

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	ASELSAN is always in compliance with current regulation, when a current regulation- based climate related potential risk is detected, it is forwarded to Enterprise Risk Management Coordination Committee Representative via “Risk Cards”. ASELSAN management identified with a form the risks and opportunities which have impact on Integrated Management Systems’ performance (IMS). This form moved to digital platform in the context of digitization less paper usage purposes, in 2021. The climate related detailed R&Os (MRV, PMR activities etc) are assessed based on the context of the company. Although ASELSAN is not in the scope of MRV; in 2021, Current National MRV regulation was reviewed with an approach of detecting potential risks that our industry may face in mid-term period referring PMR project of the Ministry. Sustainability Committee and the Early Detection and Management of Risk Committee reviews and finalizes all climate related risk analysis, and presents the critical risks that are assessed to be of high importance to the Board of Directors, according to process and the scoring methodology defined in C 2.2 They also present a report to Board of Directors about the financial and operational measures that need to be taken by ASELSAN to prevent the occurrence of the identified risks. The Board of Directors decides which measures shall be applied and the evaluations are then reported to the Early Detection and Management of Risk Committee for the purpose to be monitored and brought into action. Additionally when the relative significance of current regulation risks are identified and assessed by the strategic decision makers after a comparable structured review, they are itemized as implementation plan within the scope of ISO 14001:2015 for a detailed management. Risk rating is classified as low- medium and high rate. When high rated climate related risks are identified, the action planning commence with the initiation of IMS department. Risks and Opportunities document is annually updated and reviewed with the collaboration of IMS Department and Enterprise Risk Management Coordination Committee (ERMCC) Representative.
Emerging regulation	Relevant, always included	Emerging Regulatory risks indicate the potential increase in costs (carbon taxes related with energy and raw material or future cap & trade implementation plans, long-term strategies, actions, policies and legislation in line with Türkiye's 2053 Net Zero Emissions and Green

		Development target, the 'Climate Change Law) and the discouragement for the establishment of new production facilities. These potential threats are always assessed by the Sustainability Committee who is responsible of bringing attention to these potential impacts. When an emerging regulation-based climate related potential risk is detected, it is forwarded to Enterprise Risk Management Coordination Committee Representative via "Risk Cards". ASELSAN management identified with a form the R&O's which have impact on Integrated Management Systems' performance. (IMS). This form moved to digital platform in the context of digitization less paper usage purposes, in 2021. The climate related detailed R and O' s are assessed based on the context of the company. In 2021, Draft National Climate Change Law, Türkiye's 2053 Net Zero Emissions and Green Development target assessments, updating process of NDC at the 27th Conference of Parties (COP27) in 2022, ETS transaction studies were evaluated covering short-med and long time horizon. (Risk1) The SC& EDMR Committee review and finalize all climate related risk analysis, and presents the critical risks that are assessed to be of high importance to the Board of Directors according to process and the scoring methodology defined in C 2.2 They also present a report to Board of Directors about the financial and operational measures that need to be taken by ASELSAN to prevent the occurrence of the identified risks. The Board of Directors decides which measures shall be applied and the evaluations are then reported to the EDMR Committee to be monitored and brought into action. Additionally when the relative significance of emerging regulation risks are identified and assessed by the strategic decision makers after a comparable structured review, they are itemized also as implementation plan within the scope of ISO 14001:2015 for a detailed management. Risk rating classification realizes. When high rated climate related risks are identified, the action planning commence with the initiation of IMS department. Risk and Opportunities document is annually updated and reviewed with the collaboration of IMS Department and ERMCC Representative.
Technology	Not relevant, included	Substitution of existing products with lower emission options will not cause technology-based climate related risks for ASELSAN. There is a growing potential for low carbon technologies, like smart digital solutions, smart mobility, solar cells, insulation and products that help studies of biodiversity etc. for different sectors. Producing such technologies will enable ASELSAN to differentiate. In ASELSAN, every technologically developed product or service also serves an environmental and energy based transitional improvement and innovation. The Midas project is an example of this category and it is explained in opportunity 2. In 2021, all workflows related to procurement were reconsidered and

		their effectiveness was increased. With the efforts of the Component Engineering Unit, which was newly created under the Supply Chain Management Vice Presidency, ASELSAN's engineering units contribute to the creation of alternative materials starting from the design phase. In 2021, more than 800 products were examined and alternatives were created for 443 products. 30 alternative products are subject to license within the scope of export control regulation. A savings of USD 2 million was achieved in supply costs in the 2021 operating period. The potential is always assessed by the Sustainability Committee who is responsible of bringing attention to these potential impacts with the collaboration of research and development, production and other related departments. At company level major global and national risks that meet ASELSAN's risk management criteria are included in annual risk assessment reports. The Strategy Department in coordination with the Sustainability Committee is responsible of setting targets to reduce the impact of identified risks and making performance reviews. The Committee decides which risks and opportunities shall be reported to the Board of Directors according to process and the scoring methodology defined in C 2.2 These reports are presented to senior executives for subsequent follow-up.
Legal	Relevant, always included	Legal risks indicate increasing pricing of GHG emissions which could result in increased product prices. These potential threats are always assessed by the Sustainability Committee who is responsible of bringing attention to these potential impacts with the collaboration of production and other related departments. At company level low carbon products become more attractive for customers. This is an opportunity for ASELSAN which has the ability to produce technologies for low carbon products. The Strategy Department in coordination with the Sustainability Committee is responsible of setting targets to reduce the impact of identified risks and making performance reviews. ASELSAN did not envisage legal issues but aspects are considered and evaluated on an annual basis as part of our company-wide risk assessment process. The Committee decides which risks and opportunities shall be reported to the Board of Directors according to process and the scoring methodology defined in C2.2 These reports are presented to senior executives for subsequent follow-up.
Market	Relevant, always included	Market risks indicate increasing production costs due to changing input prices like materials, water, energy, etc. ASELSAN elaborates digital solutions for major defense industry companies in Europe and US. As a sub-contractor ASELSAN realizes the assessments about the effects of the products on climate change in order to be able to compete with the sector peers. These potential threats or opportunities are always assessed by the Sustainability Committee who is responsible of bringing attention to

		these potential impacts with the collaboration of production, purchasing, marketing and other related departments. At company level low carbon products become more attractive for customers. This is an opportunity for ASELSAN who has the ability to produce technologies for low carbon products. The Sustainability Committee decides which risks and opportunities shall be reported to the Board of Directors according to the scoring methodology defined in C 2.2 These reports are presented to senior executives for subsequent follow-up.
Reputation	Relevant, always included	Reputation risks indicate potential impacts associated with negative perceptions experienced by the public around ASELSAN's carbon performance. These potential threats are always assessed by the Sustainability Committee who is responsible of bringing attention to potential impacts with the collaboration of production and other related departments. The Sustainability Committee decides which risks and opportunities shall be reported to the Board of Directors according to process and the scoring methodology defined in C 2.2. These reports are presented to senior executives for subsequent follow-up. In the reporting year Chairman/ CEO and ASELSAN's Sustainability Ambassadors attended the workshops consisting of working group sessions under the main topics of environment/ climate, society and corporate governance.
Acute physical	Relevant, always included	Acute physical risks indicate extreme weather events which can lead to higher operational costs due to supply chain disruption as described in Risk:4. These potential threats are always assessed by the Sustainability Committee who is responsible of bringing attention to potential impacts with the collaboration of production, utility and other related departments. The Sustainability Committee decides which risks and opportunities shall be reported to the Board of Directors according to process and the scoring methodology defined in C 2.2. These reports are presented to senior executives for subsequent follow-up.
Chronic physical	Relevant, always included	Chronic physical risks indicate changed precipitation and droughts patterns which can have negative impact on energy management in the facilities as described in Risk:3. These potential threats are always assessed by the Sustainability Committee who is responsible of bringing attention to potential impacts with the collaboration of production, utility and other related departments. The Sustainability Committee decides which risks and opportunities shall be reported to the Board of Directors according to process and the scoring methodology defined in C 2.2 These reports are presented to senior executives for subsequent follow-up.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation

Carbon pricing mechanisms

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

The Paris Agreement bears high future possibilities of additional regulations coming into force in the future. After the ratification of the Paris Agreement in October 2021, Türkiye has declared its net zero pledge by 2053. The National Climate Council has completed its workshops which will form the infrastructure of short, medium and long-term strategies, actions, policies and legislation in line with Türkiye's 2053 Net Zero Emissions and Green Development target. Türkiye is expected to submit its updated nationally determined contributions at the 27th Conference of Parties (COP27) in 2022. The National Climate Law is going to be published. It will accelerate clean transition. The cap-and-trade principle which is the main solution of the EU's policy to combat climate change is adopted by EU-ETS. For the purpose to be ready to the future commitments, this system was taken in the agenda of Turkish Ministry of Environment, Urbanization & Climate Change.(MoEU&CC)
ASELSAN is not in the scope of MRV, but The National MRV regulation is likely to be revised; having the potential to bring additional emission quotas forcing our industry to face carbon cap allocation.
In a med-term time horizon this new system will have uncertainties which may result to pose some potential risks on ASELSAN such as; obligation to reduce the GHG emissions. Additional cost could be associated with "carbon pricing" resulting with an increase in indirect costs.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

5,931,900

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Base on SDS of IEA (2021), the cost CO2-e emitted in 2030 would be US$100/ton ASELSAN's 2021 total Scope 1 CO2-e emissions were 15,481 tons. If we were in the context of MRV system, 4,563 tonnes of total Scope1 verified emissions would be taken into account for ETS. For med-term time horizon, the unmitigated cost of current scope 1 emissions (2021 average currency: 1$= 13 TRY) would be 4563*100=456.300 $ (5,931,900 TRY).

But the impact could diminish after the energy efficiency projects which will be implemented in this period.

Cost of response to risk

400,000

Description of response and explanation of cost calculation

The risk magnitude on our operations will be reduced by energy efficiency projects and activities. Therefore, this risk will be likely to have less impact on our OPEX even after the foreseen time horizon

In order to manage this risk ASELSAN's Corporate Management Vice President assigned some sustainability committee members to participate the PMR and National Climate Council Meetings executed by the MoEU&CC. This communication will prepare our company to this approaching system. In the reporting year, ISO 14064:2018 GHG inventory transition activities were executed and certification took place in April 2022.

In 2021 the Energy Management System ISO 50001:2018 was set in our facilities. The certification was realized in May 2022.

Comment

Cost of managing this risk is approximately 400,000 TRY, covering management activities' related expenses to frame up energy management system in our facilities.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation

Mandates on and regulation of existing products and services

Primary potential financial impact

Increased direct costs

Company-specific description

In ASELSAN one of the primary goals is to increase the activities as a subcontractor for major defense industry companies in Europe and the US by providing services in such a way that enables the company to contribute to the development of global defense industry. In the context of EU taxonomy, ASELSAN may face product labeling requirements. Carbon footprint assessment of all the products that is planned to produce as sub-contractors of European and American companies may force the company to perform a more detailed and enhanced analysis of the systems, including assessing the environmental impacts of the products throughout the whole life cycle (i.e. a detailed LCA). ASELSAN may also need to comply with Eco-Labeling standards such as EPD in order to be able to export the products and systems to the US and Europe, which may force to make changes in product design to be able to compete with the sector peers.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

12,162,755

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

It is expected that these types of requirements will not exceed 0.5% of our OPEX. (ASELSAN Annual Report-2021 Financial Information section for OPEX details)

Cost of response to risk

450,000

Description of response and explanation of cost calculation

We closely follow the Environmental regulations in our target markets, and whenever we see that there is a need for such action, we will perform the related environmental analysis before it becomes a regulatory obligation.
ASELSAN is very meticulous in such actions and in the past many standards and reporting schemes such as ISO 27001, CDP, CMMI (Capability Maturity Model Integration) have been applied even before it was asked for by our clients. LCA thinking which is an evolving requirement of ISO 14001: 2015 and ISO 14064:2018 is inherently in the concern of ASELSAN.

Comment

The cost may consist of acquiring consultancy and verification services regarding "Environmental Product Declaration". This cost of management was calculated for a same product family.
The Product Life Cycle System, expressed as PLM (Product Life Cycle Management), which can be considered one of the milestones for ASELSAN, is the most important part of ASELSAN's digital transformation included in the ASELSAN Strategic Plan for this purpose. PLM will prepare ASELSAN for the future by providing the infrastructure for the concurrent engineering method that enables interactive and efficient work from design to production, from program management to integrated logistics support. In 2021 as part of the Project, PLM road-map and PLM program details were created, and procurement studies for PLM software were initiated. PLM and LCA may be associated with the work to be done, and the design teams may take environmental issues into account in the early design phase and may give the company a global vision about their product portfolios.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical
Heat wave

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

Featured in IPCC assessment reports our country is in a vulnerable location which could be impacted by extreme weather events. Our facilities may potentially be impacted by some big and sudden events due to extreme changes such as: Heat waves, floods, hail storms. This extreme precipitation could be cause to flood as seen as in recent years. There have been an increasing trend in Türkiye's observed temperature and similarly in extreme weather events number since 1997. SCT 2015 reported that heavy rain/floods (26%), wind storm (25%), hail (12%), heat wave (11%), and lightning (4%) were recorded as the most observed disaster respectively in 2015. Although rare, 2 dust storm and 4 tornado also occurred in 2015. (Ref: Climate Change Projections for Turkey: Three Models and Two Scenarios- Turkish State Meteorological Service.) According to obtained results based on RCP2.6 and RCP 4.5 the average annual temperature rising for 2016-2040 in Türkiye is expected to vary between 1°C - 2°C. ASELSAN is located in Central Anatolia where it may face some significant impacts due to these conditions. Changes in temperature extremes will result in an increase in cooling demand in the summer period and heating demand in the winter period. The business continuity is ensured by the deployment of specific protection systems. This change may cause an increase in the energy expenses of the company.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

36,488,265

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

As the energy expenses constitute approximately 1% of our OPEX, this risk may increase our energy expenses. 50% rise will result in energy expenses to constitute over 1.5% of our OPEX.
ASELSAN Annual Report- 2021 Financial Information section for OPEX details

Cost of response to risk

0

Description of response and explanation of cost calculation

In order to manage this risk, we priorities managing the assets in a way to prevent excessive energy consumption by enhancing building and infrastructure insulation to be able to optimize the energy consumption and reduce both cooling and heating demand to an optimum level. Some projects:
*Improvement focused regular inspections on maintenance processes, and efficient energy management systems
(SCADA systems)
*Giving priority to green solutions in the technological infrastructures and buildings design of the facilities (New smart buildings' installations aligned with the expansion projects)
*Use of environmentally friendly materials by upstream management (smart-green procurement as supplier specific resolutions)
With these precautionary projects, ASELSAN tries to be better prepared to temperature extremes. The business interruption loss insurance is in place. Those risks are managed through our insurance process.

Comment

No monetary investments were made regarding managing this risk during the reporting period.

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Upstream

Risk type & Primary climate-related risk driver

Acute physical
Flood (coastal, fluvial, pluvial, groundwater)

Primary potential financial impact

Increased indirect (operating) costs

Company-specific description

Featured in IPCC assessment reports our country is in a vulnerable location which could be impacted by extreme weather events. Our facilities may potentially be impacted by some big and sudden events due to extreme changes such as: Heat waves, floods, hail storms. This extreme precipitation could be cause to flood as seen as in recent years. There have been an increasing trend in Türkiye's observed temperature and similarly in extreme weather events number since 1997. SCT 2015 reported that heavy rain/floods (26%), wind storm (25%), hail (12%), heat wave (11%), and lightning (4%) were recorded as the most observed disaster respectively in 2015. Although rare, 2 dust storm and 4 tornado also occurred in 2015. (Ref: Climate Change Projections for Turkey: Three Models and Two Scenarios- Turkish State Meteorological Service). In this climate modelling study, it was tried to reveal the possibilities of future climate change for Türkiye with the regional climate model. According to obtained results based on

RCP2.6 and RCP 4.5 the primary climate risk driver may have impacts in the med- term. ASELSAN's main suppliers who are located in Central Anatolia may be exposed to flooding risks which may cause business interruption in the supply system. Daily shut-off due to supplier activity disruption may occur and the shipment could be interrupted related to the risk assessed. The business interruption loss insurance is in place.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

87,181,614

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The financial impact figure is calculated based on sales or delivery figure of the impacted day.
It is assumed that all suppliers located in Central Anatolia will be exposed to this risk for 1 day.
Calculation:(Revenues)20,138,952,878 /231 (working days in 2021) =87,181,614 (TRY)

Cost of response to risk

2,000,000

Description of response and explanation of cost calculation

The business interruption insurance is in place.
The cost is related with insurance premium value, covering only physical risk driver.
Those risks are managed through our insurance process.

Comment

Supplier and value chain engagement process is the management method of this risk driver. On a local level, we work on implementing more short- term solutions such as diversifying the supply chain. Activities to expand the ASELSAN Supplier Portal, which was put into use to ensure effective information exchange, have been established. Apart from this, supplier communication and development with our “Birlikte Güçlüyüz"platform developed specifically for our suppliers, infrastructure works for moving our works to a single interface have been completed. The accurate risk detection and assessment of

our global suppliers located in vulnerable regions will be specified. And also, the criteria to evaluate the significant indirect emissions with their justification will be set-up. After August 2020, we conducted direct risk assessments on sustainability issues with our local companies and tried to support the improvement of their processes.
Hereafter these risk assessments will be fulfilled by the Supply Chain Management integrated to companywide assessments. It is planned that the risk assessment of 100% of the companies will be completed in 2023.

Identifier

Risk 5

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Emerging regulation

Mandates on and regulation of existing products and services

Primary potential financial impact

Increased direct costs

Company-specific description

EU aims to be climate neutral in 2050, its efforts could be undermined by lack of ambition by EU's international partners. This would mean a risk of carbon leakage which occurs when companies transfer production to countries that are less strict about emissions. In such case, global emissions would not be reduced. The European Green Deal provides an action plan to boost the efficient use of resources by moving to a clean, circular economy; restore biodiversity and cut pollution; The EU Green Deal would counteract the risk of carbon leakage by putting a carbon price on imports of certain goods from outside the EU. Base on Green Deal- Carbon Border Adjustment mechanism, increased pricing on imported goods is considered a key regulatory-driven climate risk at ASELSAN.
"The New Climate Regime through the Lens of Economic Indicators" Report discusses the impacts of CBA on the Turkish industry with economic models. It was launched in September 2020, with the participation of the MoEU&CC and Chief Climate Negotiator. Base on general balance model, possible costs of Border Carbon Regulation for 30€ &50 € /ton CO2-e price in export and production categories of different industry sectors was assessed for 2020-2030 period. For ASELSAN the likelihood of a carbon border-adjustment based tax is expected to have a long-term effect on operational costs in the future. We closely monitor compliance with this emerging regulation and other critical climate policies. In the long term; increases in operational costs will directly affect the affordability of our products and our competitive position against EU industry peers. Supply chain costs will also be assessed after the sequel impact of the system.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

2,012,283

Potential financial impact figure – maximum (currency)

3,353,805

Explanation of financial impact figure

ASELSAN’s Enterprise Risk & Sustainability team calculated the annual financial impact on an estimated carbon tax of €30/ton CO2e and €50/ton CO2e base on general balance model of "The New Climate Regime through the Lens of Economic Indicators" Report. A realistic forecast with existing EU-ETS system tax and Scope 1 emissions was included.
ASELSAN’s 2021 total Scope 1 CO2-e verified emissions were 15,481 tons.
4563 tonnes of total Scope 1 emissions base on EU requirements would be taken into account for CBA Mechanism.
As carbon tax figure, we used 30 -50€ in calculations, in case of unmitigated scope 1 emissions.
For med-term time horizon financial implication (2021 average currency: 1€= 14,7 TL);
min 4563*30=136,890 € (2,012,283 TRY)
max 4563*50= 228,150 € (3,353,805 TRY)

Cost of response to risk

0

Description of response and explanation of cost calculation

For the purpose to understand and manage this risk ASELSAN is taking action. In 2020 Enterprise Risk and Sustainability team directly applied estimated carbon taxes against verified emissions for 2020. This tax rate range is based on nationally approved "The New Climate Regime through the Lens of Economic Indicators" report. These cost intervals will drive up overall costs for our products and impact affordability for our customers. The cost of responding to a specific affordability issue cannot be dis-aggregated from existing overhead expenditures, resulting in a disclosed value of "0" end of 2021.

Comment

Each climate-related risk category has been initially assessed by the ASELSAN’s Enterprise Risk & Sustainability team. European Green Deal as a risk for Türkiye may

be considered as a new opportunity as a conversion tool aimed at sustainable development:
• Within the framework of a strategic transformation whose elements have been determined with determination,
• Emission reduction,
• Using the funds obtained for the green transformation of companies
• Focusing on renewable energy and energy efficiency
Thanks to an alternative Green Economic Transformation scenario, both in national income, It is predicted that significant improvements can be achieved in both greenhouse gas emissions.
• The green economic transformation in the national economy shows the emission reduction target can be achieved by increasing production and employment.

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Markets

Primary climate-related opportunity driver

Access to new markets

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

The Hybrid Shunting Locomotive Project uses battery and diesel generator as power sources.
The main factors that make the hybrid locomotive environmentally friendly are;
- For the highest power requirement, both the battery and the diesel generator can be activated at the same time. Therefore, a smaller diesel generator is sufficient.
- Due to the presence of the battery, the diesel generator can be operated at the most

efficient point.
- Due to its plug-in hybrid feature, the battery can also be charged from the grid.
- Due to the regenerative feature, the battery could be charged via braking energy. In this way, wasted braking energy could be recovered.
This product provides lower fuel consumption and therefore lower CO2 emissions.
In addition, operating and maintenance costs are reduced thanks to the short operating time of the diesel generator and friction brakes.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

110,250,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The estimated sales price of a vehicle that will enter serial production is around 1,500,000 Euro. The systems given by ASELSAN for the vehicle are close to 50% of the total price. Initially, sales projections are made for 10 vehicles . The data is fixed by estimation. The potential financial impact for the short-term time horizon is around 750,000 €*10*14.7 = 110,250,000 TL (Currency 2020 1€=14.7 TRY)
For the long-term time horizon: It is evaluated that approximately 80 of these products can be sold domestically. It is expected that ASELSAN will earn over 60,000,000 Euros.

Cost to realize opportunity

88,200,000

Strategy to realize opportunity and explanation of cost calculation

The total cost of the project is approximately 6,000,000 Euros (6000000*14.7= 88,200,000 TRY in 2021)
In order to turn this project into an opportunity, more than 2 years of self-employed R&D project has been carried out in ASELSAN. During the project period, ASELSAN-UGES processes needed were implemented (project management, system, hardware and software development, subcontractor management processes, etc.)

Comment

The ERCI Innovation Awards, organized for the sixth time this year by the European Railway Clusters Initiation (ERCI), evaluate the leading innovation projects of European railway industry companies and reward the best selected projects. Developed by ASELSAN, MIDAS-R ERCI was nominated for the Innovation Awards in 2020. ASELSAN was deemed worthy of the “Best Large-Scale Company” Award with MIDAS-R.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of new products or services through R&D and innovation

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

ASELSAN MIDAS Intrusion Detection System offers the utmost capability of sensing by measurement at thousands of different points simultaneously with a fiber optic communications cable. Using the pr-existing fiber optic cable, the system locates, classifies and tracks activities/threats against valuable assets. It is ideally suited for monitoring pipelines for third-party intrusion detection, and this is the initial target for the technology. However, in addition to pipelines, recent developments allow technology to be used in leak detection and security of borders, critical facilities, railway lines and infrastructure lines (gas, water etc.) in cities. MIDAS provides early warning of an event before damage occurs while intelligently filtering non-threatening activities. Using Artificial Intelligence (AI), tailor-made algorithms analyse environmental factors and apply the parameters that give the best performance with minimum nuisance alarms. MIDAS (AI) is patented first time in the market place and being used in the pipeline and border security application for years. This project's timeline was between 2016-2019. It started to bring substantive opportunity to ASELSAN in terms of revenue.
The product has started to be used in many projects and related patent has been obtained in 2020. System installations are in progress.

Time horizon

Long-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

2,866,500,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The financial contribution to ASELSAN as Total Revenue for the period 2017-2027 is ; 220.500.000 $
(2,866,500,000 TRY, based on 2021 average currency, 1$=13 TL), for the same time horizon the financial contribution to the government and pipeline enterprise is 420.840.000 $, covering prevention of illegal tapping and pipeline damages.
Revenue (2017-2019): 8,750,000 $
Total number of MIDAS Units Sold = 50; Approx. Unit Price = 175,000 $
Revenue 3 Year period forecast (2020-2022) = 8,000,000 $
Forecast number of units to be sold ; 50; Approx. Unit Price = 160,000 $
Revenue 2023-2027 period forecast = 40,000,000 $

Cost to realize opportunity

64,714,000

Strategy to realize opportunity and explanation of cost calculation

The product has started to be used in many projects and related patent has been obtained in 2020.
MIDAS secures critical infrastructures such as petroleum and gas pipelines, and detects illegal tapping and intrusions caused by the thieves and terrorist groups. Furthermore, farmers' routine activities can also cause accidents on the pipelines and might generate unexpected damage on infrastructure and the environment as well. When a damage happens on a pipeline, entire operation halts, damaged pipelines are repaired, and the damaged pipeline segment can cause a reduction in the life-time of the entire pipeline segment. Additionally, MIDAS can be used in detecting of unauthorized digging and construction works in urban areas. Those unauthorized activities can cause serious damages on the gas and water pipelines of the cities. Using MIDAS, those activities can be detected, enabling operators to quickly intervene in to the intrusions. Consequently, serious damages, operation halts, gas or water leakages and related explosions of gas pipelines can be prevented before the incident. Most of the time, oil leakages occur after tapping and thieves steel large gallons of crude oil with trucks. Considering all these cascading impacts, any single intrusion causes a huge significant financial loss for both governments and enterprises. As financial contribution to ASELSAN, the Project Cost is

4.978.000 $. Environmental impact needs to be calculated for each incident on the pipeline.

Comment

MIDAS prevents possible direct environmental hazards such as; Fires, Crude oil leakage causing destroyed farm fields, damaged habitats and forestry, carbon & poisoning gasses emission, other (public resistance etc.)

Identifier

Opp3

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of new products or services through R&D and innovation

Primary potential financial impact

Increased revenues through access to new and emerging markets

Company-specific description

According to the information given by the Automotive Manufacturers Association, 200,000 fast charging stations will be needed in Türkiye by 2025. ASELSAN can seize a serious opportunity with the installation of these systems. Financial effects are being investigated. The fast-charging station is located at certain stops and bus depots on the passenger transport route of buses. Thanks to its modular and redundant infrastructure, these stations have the transfer and control infrastructure that will transfer 400-600kW of power to the batteries in the buses, with high safety and reliability, at high speed. ASELSAN ensures that the charging stations work effectively and efficiently with the network to which they are connected, with smart grid system solutions. Avenue EV, the Turkish automotive industry's first 100% domestic electric bus developed in cooperation with ASELSAN and TEMSA, set off from Samsun. On July 16, 2021, the contract for the Ultra Fast Charging Bus and Charging Infrastructure System Project was signed by the Metropolitan Municipality and ASELSAN.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Financial implications of these projects are evaluated. They have the potential to increase our revenue in the med-term. The financial figures are sensitive data. Specific confidentiality constraints prohibiting the disclosure.

Cost to realize opportunity

0

Strategy to realize opportunity and explanation of cost calculation

ASELSAN's Technology Road Map and Investment Plan is created in line with ASELSAN's Strategic Plan having detailed plans on each technology area (including climate friendly technologies) that will be researched and developed in the next 5 years along with the required investments." The progress of this plan is monitored and used as a measure in corporate performance.

ASELSAN actively follows a policy that would ensure maximum efficiency and profitability while seizing new opportunities and eco-friendly solutions offered by the latest technologies. Besides the maximum efficiency and profitability, new opportunities for reducing the effects of climate change is emphasized in the ASELSAN's Technology Road Map and Investment Plan.

Research and Development activities for new climate friendly product groups are currently being analysed and planned for implementation such as electric vehicles to be used for public transport as well as portable hybrid electricity generation system using renewable energy sources. We are already on the process of extending our product line to include renewable energy sources' implementation.

Producing new and more climate friendly products is a good opportunity for the company to gain new markets.

Comment

Specific confidentiality constraints prohibiting the disclosure (cost to realize opportunity)

Identifier

Opp4

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

ASELSAN’s Technology Road Map and Investment Plan is created in line with ASELSAN’s Strategic Plan having detailed plans on each technology area (including climate friendly technologies) that will be researched and developed in the next 5 years along with the required investments.” In line with Türkiye's road map on climate change and the 2053 net zero emission vision of Türkiye, the progress of this plan is monitored every year and used as a measure in corporate performance, including ASELSAN 's ability to produce technologies for low carbon products/ services.

ASELSAN, as the leading Turkish company in toll collection systems, has carried out intensive work in this field in 2018 as well. On the Istanbul-Izmir Highway, Yavuz Sultan Selim Bridge and Northern Ring road, along the newly opened road sections, new toll collection stations have been added to the existing tolling systems. The toll collection system for the new ambitious Northern Marmara Highway is provided by ASELSAN. With the establishment of 16 new MLFF systems on the newly built roads of cities in 2019, the cumulative average vehicle speed on the roads where the wage was collected increased by 9%. In this way, there is no increase in CO2 emission in these new roads due to fee collection.

In 2020, new highway toll collection systems were established to cover the Northern Marmara Highway and the Ankara Niğde Highway, and a contract was signed for the Çanakkale 1915 highway and works completed in 2021.

Vehicles of interest are identified and tracked throughout different system locations. MLFF system that allows highway users to pass through tolling point at high speed even when changing lanes without having to slow down to pay for toll. Congestion at MLFF is decreased at about %21 according to toll plazas. MLFF system reduce congestion rate at the Toll Plazas by increasing vehicles' throughput at more than 1500 vehicles per hour. The research shows that the average delay of vehicle is 13 seconds per vehicle per km (comparing to the MLFF). In general, higher penetration rates give better results in term of emission reductions. On the highway road, modeled benefits at the macro level are 1.5% reduction in CO2 emissions for a %20 penetration rate, 4.5% reduction in CO2 emissions for a %60 penetration rate, 6.5% reduction in CO2 emissions for a %90 penetration rate. Thus, MLFF improve public transportation and help to reduce air pollution, NOx and CO2 and road noise via a decline in traffic.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Financial implications of these projects are evaluated. They have the potential to increase our revenue in the short-med and long-term. The financial figures are sensitive data. Specific confidentiality constraints prohibiting the disclosure.

Cost to realize opportunity

0

Strategy to realize opportunity and explanation of cost calculation

Toll Collection Systems have been developed to maximize performance and expanded to cover all private and state highways in Türkiye in 2021
Research and Development activities for this system is analysed and planned for the implementation Therefore, the time frame of this opportunity is well performed as we can already project an increase in our revenue. The activities for this important tolling project have continued in 2021 as well. The actions to be taken in order to manage this opportunity will consequently cause an increase in our OPEX in the first place. ASELSAN Annual Report-2021 Financial Information section for OPEX details)

Comment

The Research and Development activities we hold as part of this opportunity has third parties involved to this subject. In addition to securing tolls for the constructed highways, ASELSAN toll collection systems also play an important role in the revenue reconciliation and auditing of private concessions by state institutions. For this task, special solutions were developed in order to provide security, integrity, trace-ability and control-ability of the data recorded in the system.

Identifier

Opp5

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Markets

Primary climate-related opportunity driver

Use of public-sector incentives

Primary potential financial impact

Increased diversification of financial assets

Company-specific description

By following up on all kind of technological developments pertaining to land, air, naval and aerospace platform product/system technologies, the Company not only applies technology but also designs, develops and produces product/system technologies in order to share or sell with/to national and international collaborations.
Projects are striving at maximum level in order to benefit from the technological opportunities existing in the country aiming to increase the national contribution share. For this purpose, cooperation is made with universities and various R&D organizations and importance is given to the use of local suppliers and subcontractors.
As for the projects carried out within the Group, the Research and Development incentive in compliance with the provisions of the Law on Corporate Tax numbered 5520 and Research and Development center application pursuant to the Law regarding the support of Research and Development activities numbered 5746 are being implemented together. As for non-public R&D projects, the approval of TEYDEB (Technology and Innovation Support Programs Directorate) and ARDEB (Research Support Programs Presidency) are received and supported by the institutions. Türkiye's 10th Development Plan includes multi programs on different incentives including R&D projects such as Enhancing Energy Efficiency etc. ASELSAN has a chance to benefit from governmental incentives in the scope of this program.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

27,291,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The incentive obtained consists of the incentives that are accrued in accordance with TÜBİTAK's R&D recognition letter prepared with respect to the Group's ongoing projects Current government total grants and incentives 2021 Annual Report; 27,291,000 TL. This figure represents the total grants covering also climate related ones.

Cost to realize opportunity

0

Strategy to realize opportunity and explanation of cost calculation

We don't have any cost regarding the management of this opportunity, we strictly monitor the incentive programs and apply to the ones that are related to our scope of business.The Group obtains capital support from "Support and Price Stabilization Fund" of Central Bank of Türkiye via Under secretariat of Foreign Trade's consent. The Scientific and Technological Research Council of Türkiye ("TÜBİTAK") and Technology Development Foundation of Türkiye ("TTGV") act as intermediary in accordance with Communique No:98/10 published by the Money-Loans and Coordination Board.
In accordance with Law on Technology Development Zones numbered 4691, Group utilizes withholding income tax incentive, social security premium incentive and stamp tax exceptions.

Comment

Such incentives are utilized through not paying withholding income tax incentive, social security premium incentive and stamp tax exceptions calculated based on research and development and software personnel payroll. According to Article 8 of the relevant law, all research and development expenses can be deducted until the determination of commercial earnings until 31 December 2023.

Identifier

Opp6

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of new products or services through R&D and innovation

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

ASELSAN has adopted the mission of manufacturing low-cost, efficient and high-tech products with domestic contents in civil sector for transportation, energy, smart systems, healthcare and civil telecommunication systems. Systems developed for transportation, energy, smart systems and healthcare are intended for a better and safer world. Life-

cycle costs of systems and products for transportation, energy, smart systems and healthcare are calculated as part of the design requirement. The results are followed for optimization, and reported to the customer if needed.
Approximately 60% of our country's energy production is met from imported Coal, mainly Lignite and natural gas resources. Replacing these sources with renewable energy sources in the medium term will reduce the carbon emission rate of our country. Manufacturing of the first local wind turbine with 4MW capacity is under execution. In addition, with this project, it is aimed to increase the rate of localization at least 65% by using the existing local ecosystem and thus to increase the sustainability of the ecosystem with more local wind turbine production.
The company will work with Global Design consultants for technology transfer. Additionally, ASELSAN will use the generator designed together with Middle East Technical University and the power converter designed by ASELSAN in the local wind turbines. The first two turbines will be installed at the Elektrik Üretim A.Ş.(EÜAŞ) Alaçatı WPP site. In this context, ASELSAN signed an Industry Collaboration Program with the Ministry of Industry and Technology together with EÜAŞ.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Specific confidentiality constraints prohibiting the disclosure (cost to realize opportunity)

Cost to realize opportunity

107,900,000

Strategy to realize opportunity and explanation of cost calculation

The company will work with Global Design consultants for technology transfer. Additionally, ASELSAN will use the generator designed together with Middle East Technical University and the power converter designed by ASELSAN in the local wind turbines. The first two turbines will be installed at the Elektrik Üretim A.Ş.(EÜAŞ) Alaçatı

WPP site. In this context, ASELSAN signed an Industry Collaboration Program with the Ministry of Industry and Technology together with EÜAŞ.

Comment

This project will be completed in 2024.

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?

Row 1

Transition plan

No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a transition plan within two years

Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future

After the ratification of Paris Agreement in October 2021, the net zero pledge by 2053 was confirmed by Türkiye.
The National Climate Council has completed its works which will form the infrastructure of short and long-term national strategies, actions, policies and legislation in line with Türkiye's 2053 Net Zero Emissions and Green Development target. In the next Conference of Parties (COP27) in 2022, Türkiye is going to submit its updated nationally determined contributions. The Climate Law, is going to be published, it will strengthen clean transition. The National MRV Regulation which is in force since 2018 could bring new emerging regulative duties. Türkiye will have carbon pricing system in the next two years.
In Partnership For Market Readiness Workshops, alternative carbon market options were studied.
The world's first economic and ecologic conference was held in Ankara between 30-31 March 2022, in order to be ready for global regulations in the most accurate and rapid manner on "Climate Change" and "Green Transition," to combat climate change and to create a common mind for minimizing its impact on the economy.
ASELSAN took its place as a sponsor and participant in the Eco-Climate Economy and Climate Summit.
ASELSAN believes that transitional plan must ensure the alignment with National Net-Zero target. After the revised new NDC that Türkiye will determine at COP27, a corporate transition plan will be prepared in line with the agreed data. New commitments will also be made on the basis of SBTs. In the reporting year, consistent decisions were made regarding the transition plan to be prepared by ensuring to facilitate emission reduction target by 2050. Some emission reduction actions of the Climate Transition Plan were decided after the first Sustainability Workshop organized with the leadership

of ASELSAN. Chairman/ CEO and ASELSAN's Sustainability Ambassadors attended the workshops consisting of working group sessions under the main topics of environment/ climate, water, biodiversity, society and corporate governance.

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy
Row 1	Yes, qualitative and quantitative

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios IEA 2DS	Company-wide		ASELSAN is assessing how the organization can shape its purpose, business model, and strategies to deliver climate related positive impacts that contribute to the goal of sustainable development The business strategy decisions are informed by climate-related scenarios on emission reduction pathways that related task groups assess by aligning with the opportunities. The global market trends help us to assess transitional risks. The use of climate related scenario analysis was shared with the board who oversight the performance of the system. While conducting our qualitative analysis, for transition scenario IEA 2DS, the coverage is companywide such as; operations, supply chain and product portfolio. As parameters: GDP and macro- economic variables that may have material impact on the business performance were chosen. Assumptions by region, fossil fuel prices, customer global market forecasts on CO2 emissions related with the sector were done. Various inputs to consider the 2020–2050-time horizon were used. Global trends were reassessed base on the NDC of Türkiye which is going to be revised for COP 27. After the examinations, this analysis directed us to energy efficiency and facility base emission reduction activities in asset level. In corporate level, ASELSAN works to align its climate scenarios and climate transition studies with its climate-

			related business strategy. It updates its ESG mechanism to manage and review this transition process which has emission avoidance approach for its products and services-smart systems- accelerating positive impact in civilian field. Türkiye's 2053 Net Zero Emissions and Green Development target setting task was initiated by the National Climate Council of the Ministry. The workshops that the company is attending continuously will form the infrastructure of short and long-term strategies, actions, policies and legislation in line with Paris Agreement and Green Deal Framework. Case Study Smart Systems The Contract for Smart City Traffic Safety Project, which constitutes an important step in smart city applications, was signed between Samsun Metropolitan Municipality and ASELSAN on June 01, 2021. Avenue EV, the Turkish automotive industry's first 100% domestic electric bus developed in cooperation with ASELSAN and TEMSA, set off from Samsun. On July 16, 2021, the contract for the Ultra- Fast Charging Bus and Charging Infrastructure System Project was signed by the Metropolitan Municipality and ASELSAN.
Physical climate scenarios RCP 4.5	Company-wide		To assess the qualitative risk analysis, based on physical climate scenario, we applied climate change scenario analysis compliant with the requirements of the SBT Initiative (SBTi), RCP 4.5 representing the IPCC's 2 degrees Celsius scenario. Some important improvements have been made in the last three years, based on physical risk analysis.In ASELSAN, facilities are managed with the Building Management System, Integrated Data Based Control, Surveillance System and Energy Monitoring System infrastructures. System infrastructures that are inter-connected and capable of detecting the environment via sensors, performing data analytics, and identifying requirements. This is how organizational processes are managed proactively to monitor consumption values and take prompt action to prevent any loss of energy and water. The purpose here is to help establish traceable and measurable smart systems. Information on energy consumption is shared with internal stakeholders regularly. Efforts are undertaken to adopt the principles of "Total

			Productive Maintenance" as an integral element of the corporate culture. The scenario analysis looked out to 2030 and 2050; 2030 was chosen as a time horizon because 10 years is in our planning. The assessment's findings on acute and chronic physical risk as well as damages and energy costs are influencing our planning and capital allocation and expenditures for new facility buildings. As for new investments, devices are selected and systems installed with utmost attention to prefer energy-efficient, high-performance, and automatically-controlled devices (energy-efficient procurement) and minimize the risk of human error. All new construction will comply with the Green and Smart Construction and the LEED v4 Gold Standard, which includes energy efficiency requirements and site selection criteria counter acute and chronic physical risk due to climate change..

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

Training and knowledge gaining about scenarios and their interactions in company context was accomplished. Problem definition accompanied with swot analysis was fulfilled by interactive engagement and communication; the assumptions, biases and differing mental approaches were used to help the company's decision-process. The communication relation with other departments and EDRM was fulfilled. The CEO was carried out the executive-level support.

Assessment of past trends was completed. Topical climate risks were fulfilled after the study of current climate state of the company. The focal physical and transitional questions:

Has the company been affected significantly from past climate-related events, patterns, trends or variables?

What are the factors exerting influence on the company? List physical and transitional potential significant points that climate-related issues have impacts on the company and its environment (upstream and downstream)

What are the effects on people, infrastructure, business continuity?

What expected future developments need to be analysed? As transitional phase what are the significant changes in customer preferences, markets, societies, policies, legal frameworks, and technological innovations.

Which of the technological trends could play a key role in 2025 and 2050 and what is

ASELSAN's contribution (e.g, renewable energy, smart buildings, electrification, green hydrogen etc.)
List of the driving forces and key uncertainties to shape future performance
The variables to choose to support the decision making.
For the purpose to understand better the focal questions on the assessment of R&O we use IPCC) RCP4.5 scenario and International Energy Agency (IEA 2DS) scenario providing a large structure.
ASELSAN studied first energy intensive and critical facilities with critical business units.
The useful life of large corporate assets is taken into account when considering the time frame addressed in focal questions. In scenario selecting we consider corporate capital and investment planning with Paris Agreement time-frames.
All are compatible with selected scenarios and in line with the decarbonization strategy, new smart system preparations in products and services will facilitate transition action plan preparations.

Results of the climate-related scenario analysis with respect to the focal questions

Transition R&O
Results demonstrated that the climate related strategy will bring several opportunities to the company who can afford customer expectations.
ASELSAN is a technology production center that successfully extended its knowledge in the civilian field in addition to defense industry. The field of civil technologies creates new and accessible opportunities such as energy, transportation, security, traffic, automation, medical and financial systems, biodiversity etc.
Energy efficient smart product design and innovation has a priority in all R&D financial planning. R&D projects on smart rail systems, water technologies and electric vehicles, renewable energy systems are in a continuous improvement.
The protocols on smart city systems formation was signed with two metropolitan municipalities of Türkiye. A contract for "Renewal of Alaçatı WPP by Manufacturing Local Wind Turbines" was signed on September 22, 2021.
ASELSAN allocates an average of 7% of its annual turnover to internally funded R&D activities. As Turkiye's largest R&D base ASELSAN is the company with the highest R&D spending. ASELSAN aims to gain strength with its new business partners that will join the family as important pillars of its strategy, and to enrich the national industry ecosystem with national and domestic solutions. The awareness raising on climate related environmental issues is one of the material topics that will improve the company's value chain which have a critical role in the road to net zero target.
ASELSAN is conducting IPCC based risk analyses (2016-2030) to reduce internal carbon emissions and took measures against the identified risks. As a result of the focal questions in physical risks part following results came out:
1-Need to build smart buildings in the facilities; the office building in Istanbul Teknokpark campus was designed taking into account the LEED GOLD certificate requirements. The construction implementation of the project, whose design studies have been completed in Istanbul Technopark, continues.
2-A budget has been allocated for infrastructure improvement studies against physical risks that will affect our production and activity areas. With additional assemblies, the

total number of analyzers reached to 138. The total cost of new analyzer additions is approximately 7000 Euros.
3-The supply management plan was revised against the interruptions that physical risks might create in the supply chain activities, and the approved suppliers were reassessed in terms of supply size and backed up separately base on regional activity.
4- "Aim to reach "Consultant Country" status in the Antarctic Treaty came out. Within the scope of the Antarctic Agreement, the scientific team conducting research in the fields of climate related topics carbon, water and biodiversity in Antarctica, was supported with ASELSAN's communication and energy technologies

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	In ASELSAN climate related risks and opportunities related to products and services innovation, standards, emerging regulations and market presence are identified in the risk assessment process and influence our strategy. The company aims to continue to be involved in activities that have positive impact. Our strategy canalizes to be one of the main producers of renewable energy technologies in the World and substitution of existing products with lower emission options. There is an increased demand for new low carbon technologies, materials, products and services such as smart digital solutions, smart mobility, solar cells, insulation etc. for different sectors. The most important aspect of climate change influencing our strategy is the opportunity to develop a green business which will allow emission avoidance in the use phase. To support our strategy, a ten-year time frame was set to address opportunities in the transition to low carbon economy in mobility and renewable energy products/services in the context of emerging regulations and new markets. As transportation related GHG emissions account for nearly 14% of Türkiye's total emissions, it is aimed to supply necessary electric vehicle systems designed for public transportation of major municipalities in Türkiye. In line with the expectations of the automotive industry, our mass production capabilities have been developed and effective cost management processes have been operated to meet

		expectations. Avenue EV, the Turkish automotive industry's first 100% domestic electric bus developed in cooperation with ASELSAN and TEMSA, set off from Samsun. On July 16, 2021, the contract for the Ultra-Fast Charging Bus and Charging Infrastructure System Project was signed by the Metropolitan Municipality and ASELSAN. ASELSAN also decided to conduct internally funded R&D activities for the design of local wind turbines and power conversion components for capacities over MW power range. ASELSAN and EÜAŞ signed a contract for "Renewal of Alaçatı WPP by Manufacturing Local Wind Turbines" on September 22, 2021. These projects are the most important business decisions executed after the risk and opportunities assessments and have high impacts on the business strategy of 2021 and beyond.
Supply chain and/or value chain	Yes	In ASELSAN climate related risks and opportunities, related with current and emerging regulation, energy procurement, physical risks are identified in the risk assessment process and influence our strategy for supply chain. To support our strategy, a ten-year time frame was set to address risks such as current or emerging regulations. Targets include a goal to reduce first-tier production supplier and product transportation. Most substantial business decision: Activities to expand the ASELSAN Supplier Portal, which was put into use to ensure effective information exchange, have been completed. Apart from this, supplier communication and development with our "Birlikte Güçlüyüz Platform" developed specifically for our suppliers, infrastructure works for moving our works to a single interface have been completed and put into practice in the first quarter of 2020. During the reporting year the New Procurement Management Process was used to strengthen internal and external communication and data gathering activities. Energy Efficient Purchasing Procedure was used for procurement activities. With the studies carried out in this context, taking into account energy efficiency at the procurement stage with process innovations such as integration and minimization of logistics activities, emphasis on environmentally friendly technologies in the selection of machinery / equipment, etc. applications continued. For an ongoing improvement, the Sustainability Scorecard is used to set expectations, evaluate our suppliers' performance,

		Within the supplier risk management activities and new rewarding system, the accurate risk detection and assessment of our global suppliers located in vulnerable regions were facilitated. In 2021, it was determined that the weight of suppliers' risks within the scope of ESG in total risks is 12%. With these efforts, a transition to LCA activities will be provided while strong and stable data source will be ready for an ambitious scope 3 target setting.
Investment in R&D	Yes	In ASELSAN climate related risks and opportunities directing investment in R&D that affords product and services' innovation and also customer expectations have impacted and influenced R&D decisions and investments. After the R&O assessments, it was concluded that more public or private institutions and companies in Türkiye depend on ASELSAN for their high-tech system requirements. Progressing studies are carried out to develop innovative and unique technologies that will provide efficient and uninterrupted electricity production from solar and wind energy, one of the rich renewable energy sources of our country. Studies on renewable energy, efficient energy transmission and distribution are continued in this respect. Most substantial business decision is that critical components have to be developed with maximum national possibilities to provide competitive advantage in renewable energy system solutions. Another decision was passed to establish an R&D Management Vice Presidency to ensure an effective, efficient, and centralized management of R&D, which constitute one of the most important elements of ASELSAN's mission in defense and civilian activities, since its founding. In the field of wind energy; full scale power converter systems and grid connection algorithms required by national power transmission operator; design, development and production processes have been completed. ASELSAN and EÜAŞ signed a contract for "Renewal of Alaçatı WPP by Manufacturing Local Wind Turbines" on September 22, 2021. This project within the scope of Industrial Collaboration Program is intended for dismantle of 12 turbines of 600 KW which expired economic life at Alaçatı WPP site as well as manufacturing, installation and commissioning of 2 locally manufactured wind turbines. ASELSAN considers ten-year time horizon to integrate advanced design and production innovation and decided to spend approximately 7% of the annual turnover to its

		Research and Development activities financed with its own resources. In addition, it allocates a share of approximately 2% of itsturnover every year for technological investments that support innovation. According to Turkish Time Magazine's "R&D 250 - Companies with Highest R&D Spending in Türkiye" Survey, ASELSAN ranked 1st with its R&D spending.
Operations	Yes	The operational risks are assessed by the company by taking into account energy saving, potential and possible optimization points in the production & activities. In line with the responsible and effective management of the resources it uses, ASELSAN received the strong support of the Senior Management in the implementation process of the ISO 50001:2018 Energy Management System, which is a management approach that considers the conscious and efficient use of energy in its activities. In this context, in 2021; improvements with the Energy Management System infrastructure was in progress in all campuses where certification was accomplished in May 2021. ASELSAN considers ten-year time horizon in support of the operations strategy while addressing near-med term risk such as current or emerging regulations. Energy reduction activities are carried out during the processes. Renewable electricity transition is already underway, although we are not yet influenced by the regulatory changes in Turkiye, it is also another aspect of climate change, as we prefer precautionary to be prepared to the changes in regulation. Carbon pricing systems (as disclosed in C 2.3 a Risk 1) is on the rise and could result by an increase in operational costs for our company for the med-term period, but currently ASELSAN is not in the context of MRV system. As part of the most important component of our strategy regarding climate change, due to efficiency of our carbon reduction projects, absolute target setting process have been activated in the reporting year. Natural gas and electricity emission reduction absolute targets have been set, new EV's started to be used in the company. A 100% conversion target on EV 's by 2030 was set. All targets would be enlarged in the short term base on energy performance in operations. We have factored the risks of increased chronic and acute physical risk and rising energy costs into new facility building establishments;The office building in Istanbul Teknokpark campus was designed by taking into account the LEED GOLD certificate requirements. İstanbul Teknopark, building

		construction is in progress. Our Energy Systems Program Management Department, will support the deploying of renewable energy usage throughout our facilities and products.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Indirect costs Capital expenditures Capital allocation	Climate related risk& opportunity assessments have influenced the company's financial planning as relates to revenues, direct costs, indirect costs, capital allocation, capital expenditures. As a transition case; climate-related risks and opportunities related to product and services' innovation, emerging regulations and standards, and customer requirements were identified in company's climate risk assessment which influence long term financial planning with related revenues. It poses an opportunity for ASELSAN to develop more low-emissions goods and services. This would likely impact the projected revenue in the future that ASELSAN aims to be one of the main producers of renewable energy technologies in Türkiye. Due to emerging opportunities to develop low-emission goods and services the investment in R&D will continue. In the reporting year, the total expenditure on R&D activities was 5615 millionTRY, the previous year was 3356 million TRY. We have the opportunity to increase our revenue by answering the expectations of the metropolitan cities, public corporate, automotive industry. Our mass production capabilities have been developed and effective cost management processes have been operated to meet expectations. In 2021, the Protocol for Smart City Traffic Safety Project was signed between Samsun Metropolitan Municipality and ASELSAN. The project is primarily intended to change the existing traffic signaling system in Samsun City and make it dynamic, thus ensuring the communication of the intersections with each other and relieving the traffic flow with the most appropriate signal times. Avenue EV, the Turkish automotive industry's first 100% domestic electric bus developed in cooperation with ASELSAN and TEMSA, is setting off from Samsun. ARTU-Advanced Remote Terminal Unit devices and the local SCADA system developed within the UGES Industry Presidency started to be used in BOTAŞ oil and natural gas networks. Within this scope, the installation of the ASELSAN SCADA system and ARTU devices has started on the Batman-Dörtyol line, the oldest crude oil pipeline in

		Türkiye, to replace the current manual control method. Within the scope of the cooperation agreement signed with Sabancı University and Konya Metropolitan Municipality, ASELSAN started to work on the roadmap that includes the smart city strategies of Konya Metropolitan Municipality. ASELSAN's transition road map will include integration of 100% renewable energy for its operations in 15 year-time horizons. To reduce the operational energy costs and GHG emissions, new efficiency increasing projects will be accelerated. GHG Emission Reduction Criteria setting for main suppliers will be effective after 2027. In 2021, ASELSAN's turnover rose by 25% year-on-year totaling over TRY 20.1 billion. The Company's net profit also increased by 60% compared to previous year to stand at TRY 7.1 billion. In case of any capital expenditure or allocation we consider implementing efficient technologies compatible to reduce the magnitude of climate related potential risks. It is also an opportunity to reduce the costs. While making an investment decision both for a new production facility, a capacity increase (Gölbaşı expansion project) we consider installing the most efficient technologies in order to reduce the risk of high operating costs. In the long-term the capital expenditure/capital allocation could be impacted to be overall low to medium through the financial planning.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

Intensity target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Year target was set

2021

Target coverage

Business activity

Scope(s)

Scope 1

Scope 2 accounting method

Scope 3 category(ies)

Base year

2021

Base year Scope 1 emissions covered by target (metric tons CO2e)

10,551.96

Base year Scope 2 emissions covered by target (metric tons CO2e)

Base year Scope 3 emissions covered by target (metric tons CO2e)

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

10,551.96

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

68.16

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

68.16

Target year

2030

Targeted reduction from base year (%)

25.44

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

7,867.541376

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

10,551.96

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

10,551.96

% of target achieved relative to base year [auto-calculated]

0

Target status in reporting year

New

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

Target ambition

Please explain target coverage and identify any exclusions

The target covers 2 business activities:
1-Natural Gas consumption reduction in the context of scope 1 facilities emissions,
2- Company Fleet's all vehicles will be converted to EV's till the end of 2030.
There is no any exclusion.

Plan for achieving target, and progress made to the end of the reporting year

Base on the EnPI of ISO 50001 for Natural Gas;
* In 2021, 2% efficiency improvement was targeted compared to the 2019 base year, and 3% improvement was achieved. (SETI=0.97)
* 0.5% efficiency improvement is targeted in 2022 compared to the base year of 2021.
*In the remaining years; Until 2030, it is aimed to increase productivity by 1% every year. (A total of 9% is targeted for the year 2030)
As a company initiative all company cars will be converted to EV's by 2030. 100% conversion rate is targeted in 2030
The targets would be enlarged in the short term base on energy performance.
Use of environmentally friendly materials, emission reduction through continuous development efforts in operational
processes, management of environmentally friendly post-production operations, regular inspections on maintenance processes, and efficient energy management systems are key principles for the Company.
Within the scope of the ISO 50001 Energy Management System, regression analyses were carried out for electricity, natural gas, and diesel energy used in ASELSAN and Energy Reference Lines were determined. Significant Energy Users (SEUs) for each

energy type and those who are responsible for SEUs were identified. Energy Reference Lines were determined through regression analyzes according to energy consumption and independent variables for SEUs. Independent variables for energy types and SEUs include values such as heating degree day (HDD), cooling degree day (CDD), humidity degree (HDG), total labor-hour, panel-operation data, capacity utilization rate, vehicle-KM.
The Solar Power Plant (SPP) potential at the Company's facilities were examined and reported. GES feasibility studies were conducted in consultation with Engineering Procurement and Construction (EPC) companies and shared with
the Senior Management. The issue of installing SPP systems in areas other than ASELSAN facilities is also evaluated in these studies. In line with these targets, Energy Performance Indicators (EnPG) are checked monthly for energy consumption and necessary actions are taken in case of deviation from the target.
Within this scope, Energy Efficiency potentials and projects were determined by conducting an Energy Study at ASELSAN Macunköy, Akyurt and Gölbaşı facilities in 2021.

List the emissions reduction initiatives which contributed most to achieving this target

Target reference number
Abs 2

Year target was set
2021

Target coverage
Business activity

Scope(s)
Scope 2

Scope 2 accounting method
Location-based

Scope 3 category(ies)

Base year
2021

Base year Scope 1 emissions covered by target (metric tons CO2e)

Base year Scope 2 emissions covered by target (metric tons CO2e)
37,760.23

Base year Scope 3 emissions covered by target (metric tons CO2e)

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

37,760.23

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

99.56

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

99.56

Target year

2030

Targeted reduction from base year (%)

9

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

34,361.8093

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

37,760.23

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

37,760.23

% of target achieved relative to base year [auto-calculated]

0

Target status in reporting year

New

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

Target ambition

Please explain target coverage and identify any exclusions

The target covers scope 2 emissions; Electricity consumption reduction in the context of scope 2 facilities emissions.
This target would be enlarged in the short term base on energy performance.

Plan for achieving target, and progress made to the end of the reporting year

2% performance improvement was identified in electricity consumption compared to the reference year based on the EnPI.
Annual targets were set based on the Energy Performance Indicator (EnPI) for each type of energy (electricity, natural gas, and diesel) and SEU consumption. Annual targets, and realizations are evaluated in monthly EnPI controls and necessary actions are taken. Within this scope, Energy Efficiency potentials and projects that can be performed, were determined by conducting an Energy Study at ASELSAN Macunköy, Akyurt and Gölbaşı facilities in 2021.
The “Energy Management System Awareness” videos, shot in cooperation with the Energy Management System project team, are planned to be shared both in the Company’s internal communication channels and social media channels in 2022. Awareness activities will be carried out outside the Company through videos prepared with the contribution of company employees.
ASELSAN prioritizes green building designs in new buildings in line with the Principle of Energy Efficient Design.
Maintenance, repair, and revision work on heating & cooling devices, ventilation devices, pressure air, vacuum, aspirators, steam humidifiers, process coolers, treatment devices, transformers, UPS and generators, CCTVs, the entrance control system, fire detectors and extinguishers, illumination, lifters, and conveyors are carried out in a systemic manner as part of the operation, maintenance, and repair of facilities’ technology infrastructure.
All these systems are managed via the Building Management System (BMS) and Integrated Data Driven Supervisory Control and Data Acquisition System (SCADA), and Energy Monitoring System infrastructures that are interconnected and capable of detecting the environment via sensors, performing data analytics, and identifying requirements. This is how organizational processes are managed proactively to monitor consumption values and take prompt action to prevent any loss of energy and water. The purpose here is to help establish traceable and measurable smart systems. Information on energy consumption is shared with internal stakeholders regularly.
LED-equipped fixtures, motion sensors, local lighting techniques, as well as central compensation at transformers and building insulation works all contribute to energy optimization. In addition, steps are taken for energy efficient system design and

practices as well as for renewable energies in heating, cooling, and pressure air systems.

List the emissions reduction initiatives which contributed most to achieving this target

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number

Int 1

Year target was set

2016

Target coverage

Company-wide

Scope(s)

Scope 1
Scope 2

Scope 2 accounting method

Location-based

Scope 3 category(ies)

Intensity metric

Metric tons CO2e per unit revenue

Base year

2016

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)

0.0000032277

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)

0.0000103966

Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)

0.0000136243

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure

100

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure

100

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure

% of total base year emissions in all selected Scopes covered by this intensity figure

100

Target year

2022

Targeted reduction from base year (%)

81.89

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]

0.0000024674

% change anticipated in absolute Scope 1+2 emissions

31.54

% change anticipated in absolute Scope 3 emissions

778.2

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)

0.0000007687

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)

0.0000018832

Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)

0.000002652

% of target achieved relative to base year [auto-calculated]

98.3450723758

Target status in reporting year

Underway

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

Target ambition

Please explain target coverage and identify any exclusions

100% of emissions in scope are covered in this target. As a consequence of the effectiveness of our ambitious carbon reduction projects, we revised this target's % reduction from base year; from 4.7% to 81.89% two years ago.
There will be an increase in the absolute emissions in the following years as a consequence of our growth and expansion projects. The increase in the absolute emissions will be at minor level compared to our growth in all business dimensions.
Our intensity figure at base year was 0.0000136242721473774
Our intensity figure 2017 is 0.0000107911449051455
Our intensity figure 2018 is 0.00000637280616616315
Our intensity figure 2019 is 0.00000399107377208420
Our intensity figure 2020 is 0.00000353995981718683
Our intensity figure 2021 is 0.0000026519713185047
Our intensity figure at target year 2022 will be 0.00000246753064029772
In the following years there will be a continuous increase at % achieved till target year.
Our revenue and GHG emissions reduction target is monitored and revised regularly. However, we can only share our projected revenue growth in 1-year forecast periods. We consider our revenue projections over 5 years as commercially sensitive data. Specific confidentiality constraints prohibiting the disclosure.
The reason of increase in % change anticipated in absolute scope 3 emissions is the extension of the boundary within the scope of compliance with the new version of ISO 14064:2018.
The criteria to evaluate the significant indirect emissions with their justification has been set-up by the transition to the new version of ISO 14064:2018. The boundary setting and assumptions related to supply and value chain emissions will be accurate, leading us to set a clear-cut new base year. With these efforts, a transition to LCA activities will be provided while strong and stable data source will be ready for Science Based Target setting.

Plan for achieving target, and progress made to the end of the reporting year

Maintaining its sustainable growth through its investments, ASELSAN's total sales increased by 25% compared to the previous year and reached TRY 20.1 billion. The total backlog of our company amounted to USD 8.5 billion as of the end of the year, with the contribution of new orders exceeding USD 2 billion.
Plans to achieve the target:
*Emission reduction activities through continuous improvement efforts in operational

processes (smart operations)
*Improvement focused regular inspections on maintenance processes, and efficient energy management systems
(SCADA systems)
*Give priority to green solutions in the technological infrastructures and buildings design of the facilities (New smart buildings' installations aligned with the expansion projects)
*Use of environmentally friendly materials by upstream management (smart-green procurement as supplier specific resolutions)
*Emission avoiding product design, renewable systems production and management (smart cities): “intersection controller”, “electric car system development” , “wind turbine development” , " solar inverter development activities".

List the emissions reduction initiatives which contributed most to achieving this target

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Net-zero target(s)
Other climate-related target(s)

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

2019

Target coverage

Product level

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Low-carbon vehicles
Percentage of low-carbon vehicles sold

Target denominator (intensity targets only)

Base year

2019

Figure or percentage in base year

1

Target year

2030

Figure or percentage in target year

80

Figure or percentage in reporting year

1

% of target achieved relative to base year [auto-calculated]

0

Target status in reporting year

Underway

Is this target part of an emissions target?

This is a product level target having a use phase influence as avoiding third party's emissions.

Is this target part of an overarching initiative?

Low-Carbon Technology Partnerships initiative

Please explain target coverage and identify any exclusions

The Hybrid Shunting Locomotive is in the rail vehicle (rolling stock) category. The locomotive features a modern TCMS (Train Control and Management System), advanced traction control algorithms, energy efficient semiconductor materials (IGBT and SiC), and Li-ion battery technology. With these features, the locomotive has a modern design that is more efficient in terms of energy consumption, quieter in terms of noise and greener in terms of emissions.

Plan for achieving target, and progress made to the end of the reporting year

The contract signing process is in progress.
In line with the needs of TCDD Taşımacılık A.Ş., the Company continues to work on converting the DE11000-type diesel electric shunting locomotives in its fleet into hybrid shunting locomotives with lower operation and maintenance costs and reduced acoustic noise and harmful emission values. It is anticipated that hybrid shunting locomotives to be developed with national resources will be used by TCDD Taşımacılık A.Ş. and rented by logistics companies for transportation activities, thanks to its advantages of fuel saving and emission. Fuel consumption analysis of the hybrid shunting locomotive was made according to the U.S. EPA (Environmental Protection Agency) Load Profile.

List the actions which contributed most to achieving this target

Target reference number

Oth 2

Year target was set

2019

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Waste management

Percentage of total waste generated that is recycled

Target denominator (intensity targets only)

Base year

2019

Figure or percentage in base year

0.68

Target year

2030

Figure or percentage in target year

0.83

Figure or percentage in reporting year

80

% of target achieved relative to base year [auto-calculated]

52,880

Target status in reporting year

Underway

Is this target part of an emissions target?

It is a different target being a part of a project called zero-waste project

Is this target part of an overarching initiative?

Other, please specify

It is a part of the National Policy on Zero Wastes

Please explain target coverage and identify any exclusions

This target covers the wastes segregated from ASELSAN's campuses.

Plan for achieving target, and progress made to the end of the reporting year

As part of the zero-waste project, 68% of the waste collected in 2019 was recycled and 32% was sent to landfill. This value is targeted to increase by 15% in 2030, reaching a total of 83% recycling rate.

List the actions which contributed most to achieving this target

Target reference number

Oth 3

Year target was set

2019

Target coverage

Site/facility

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Low-carbon buildings

Percentage of buildings with a green building certificate

Target denominator (intensity targets only)

Base year

2019

Figure or percentage in base year

0

Target year

2025

Figure or percentage in target year

2

Figure or percentage in reporting year

0

% of target achieved relative to base year [auto-calculated]

0

Target status in reporting year

Underway

Is this target part of an emissions target?

It is not a part of an emission target. There will be an indirect decreasing impact on facilities emissions.

Is this target part of an overarching initiative?

Other, please specify

Gold Certified Leed buildings construction

Please explain target coverage and identify any exclusions

The decision to build Gold Certified Leed buildings for Istanbul Teknokent was realized. The building, which is under construction in Istanbul Teknopark, is planned to be completed in 2022-2023

Plan for achieving target, and progress made to the end of the reporting year

After the construction completion of the buildings, the emissions per area & FTE will be recalculated.
The emission mitigation figure will be used to determine to achieve the target.
Gold certification process will be started.

List the actions which contributed most to achieving this target

Target reference number

Oth 4

Year target was set

2021

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Low-carbon vehicles
Percentage of battery electric vehicles in company fleet

Target denominator (intensity targets only)

Base year

2020

Figure or percentage in base year

0

Target year

2030

Figure or percentage in target year

100

Figure or percentage in reporting year

0.5

% of target achieved relative to base year [auto-calculated]

0.5

Target status in reporting year

New

Is this target part of an emissions target?

It is part of the absolute emission reduction ABS1 in the scope of Net-Zero target (4.1.a)
In the reporting year the conversion to EV's realized 0.5%.

Is this target part of an overarching initiative?

Other, please specify

Mobility base absolute emission reduction in the scope of Net-Zero target

Please explain target coverage and identify any exclusions

This target has been chosen because it is possible to reduce mobility-based fuel emissions, thus helping to reduce scope 1 absolute emissions in 2030.

Plan for achieving target, and progress made to the end of the reporting year

It is a study carried out to convert all of the vehicles used in the company to electric vehicles by 2030.
The conversion rate is planned 20% as of the end of 2025.
After 2025, a conversion rate differing between 15-20% is planned every year until the target year.

List the actions which contributed most to achieving this target

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number

NZ1

Target coverage

Company-wide

Absolute/intensity emission target(s) linked to this net-zero target

Abs1

Abs2

Target year for achieving net zero

2050

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

Please explain target coverage and identify any exclusions

The transition action plan studies are in progress.

In order to set companywide target, all scopes will be included and an absolute target will be given.

Emissions from campus offices will be eliminated by carbon offset.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?

Yes

Planned milestones and/or near-term investments for neutralization at target year

Within the scope of net zero emissions for 2050, the work to determine the road map has started. In this context, the entire ASELSAN family continues to work in their respective fields. As the most important step, ASELSAN has added the item “removal of net zero emissions road map by 2050” as an activity to its main strategy. In this context, targets have been started to be assigned to all Sector Presidencies/Deputy General Managers. Meetings held within the scope of our country's commitment to net zero emissions for 2053 are attended, and mutual negotiations are held in order to advance a parallel process in line with our country's goals.

Within the framework of our road map, it has been decided that the priority action will be on passenger vehicles.

One of ASELSAN's most important emission sources is passenger vehicles. In this context, it is planned to convert 20% of our passenger car fleet to electric vehicles in 2025 and 100% in 2030. In this context net zero scope 1 emission reduction in diesel based mobile activities is targeted. A road map has been started to be determined for other emission sources, mainly electricity and natural gas with the planned efficiency studies in electricity and natural gas consumption.

The targets are explained in 4.1.a and 4.1.b divisions.

By using its renewable energy products, ASELSAN will take advantage to supply its electricity from renewable energy sources in the near-term. The feasibility studies are under development.

As of 2022, ASELSAN has started tree planting activities. In this context, it is planned to support the process.

The Carbon Capture Technologies Workshop organized by the Ministry of Energy and Natural Resources was attended and opinions were given on this matter.

We started to share each stage of the road map with the entire value chain in a transparent manner.

Planned actions to mitigate emissions beyond your value chain (optional)

We will offer incentives for suppliers who reduce our operational emissions (Scopes 1 &2) and also incentives for suppliers who reduce our upstream emissions (S:3)
ENERGY EFFICIENT PURCHASING PROCEDURE was established for procurement activities. With the studies carried out in this context, taking into account energy efficiency at the procurement stage, etc. with process innovations such as integration and minimization of logistics activities, emphasis on environmentally friendly technologies in the selection of machinery / equipment, etc. applications are activated. It is planned to create some indicators in the upcoming period in order to monitor and report the outcomes to be achieved.
In 2022, it is aimed to include more firms in the process and to increase awareness by providing training within the framework of CDP climate change.
Within the scope of ISO 50001 Energy Management System, purchasing of materials with certain criteria started to be carried out in accordance with the Energy Efficient Procurement Procedure as of 11.03.2021. Significant Energy Users (SPEs), are procured in accordance with this procedure.
With this system;
- Energy Efficient Purchasing option has been added to the Request for Quotation and Purchase Request screens so that the requester can mark and inform the purchasing staff.
- Since the purchasing units are responsible for purchasing the materials specified as Energy Efficient by the requester in this way, warning letters are provided on the purchasing screens so that the demands in the relevant product groups are not overlooked.

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	2	200
To be implemented*	8	1,000
Implementation commenced*	1	320

Implemented*	8	572
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Energy efficiency in buildings
Heating, Ventilation and Air Conditioning (HVAC)

Estimated annual CO2e savings (metric tonnes CO2e)

335

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

600,000

Investment required (unit currency – as specified in C0.4)

1,700,000

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment

Several improvements have been realized, such as;
1-Macunköy Campus free cooling chiller preference and EnV maintenance SG-2 revision
The contribution of the studies carried out in 2020 was compared and analysed with the actual consumption data from energy analyzers, and it was seen that 44,503 kWh/year energy gain was achieved for the same cooling process in 2021.
2-Macunköy HBT-15 NM and auxiliary duty loads adiabatic humidification system conversion
The transition to adiabatic humidifiers, which consume less energy, instead of electric humidifiers working together with central air handling units, has been realized in areas where it is structurally feasible.
43,000 kWh energy efficiency was achieved.
3-Reducing the consumption of humidifiers in Akyurt office areas

Humidifiers working together with air handling units were not operated in office areas. In this case, the humidity of the places decreased to 30% during the winter months and there was no problem in terms of comfort. No expenditure has been made for this activity. 561,368 kWh energy efficiency was achieved.
4-Akyurt clean room energy efficiency study
The motor of the Clean Room AH7 air handling unit was replaced together with the fan, and the motor with a capacity of 30 kW with frequency inverter was replaced with a motor with a capacity of 45 kW. 124,497 kWh energy efficiency was achieved.

Initiative category & Initiative type

Energy efficiency in buildings
Solar shading

Estimated annual CO2e savings (metric tonnes CO2e)

93

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

300,000

Investment required (unit currency – as specified in C0.4)

880,000

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment

Reducing the cooling load by covering the glass ceilings of Gölbaşı corridor areas with film
The greenhouse effect is reduced and cooling energy is saved by coating the window film.
215,000 kWh energy efficiency was achieved.
The verification was achieved during 14064:2018 certification for this mitigation activity.

Initiative category & Initiative type

Energy efficiency in buildings
Lighting

Estimated annual CO2e savings (metric tonnes CO2e)

144

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

773,756

Investment required (unit currency – as specified in C0.4)

864,845

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment

LED Lighting conversion realized in 3 large campuses, in the context of 3 new projects. 333,000 kWh energy efficiency was achieved.
The verification was achieved during 14064:2018 certification for this group of mitigation activity.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Financial optimization calculations	In ASELSAN, we constantly try to develop projects that increase energy efficiency. When we have a project idea, the related directorate makes a detailed feasibility analysis that shows how much investment is required for a certain project and how much savings (both in terms of energy and financial savings) can be achieved with that particular project. If the payback period of the project is below 5 years and if the project lifetime is over 10 years, a report is prepared and the project is submitted for budget approval. Then this project is included in the budget plans for the upcoming year. Previous years' GHG emission target revision was materialized by Integrated Management Systems Department for the strategic planning covering the period 2016-2022. It is explained with details, in section 4.1 b The financial optimization calculations on energy efficiency are

	completed, the new absolute targets are in progress with new investment drivers (section 4.1.a)
Dedicated budget for low-carbon product R&D	ASELSAN aims to be a responsible producer for a globally responsible consumption. Substitution of existing products with lower emission options is aligned with the Research and Development activities. There is an increased demand for new low carbon technologies, materials, products and services such as smart digital solutions, smart mobility, solar cells, insulation etc. for different sectors. ASELSAN aims to be one of the main producers of renewable energy technologies and low carbon products in Türkiye in the mid- term. The Electric Vehicle Systems Program Management Department started a Research and Development project with TEMSA in March 2015 with the aim of producing the first domestic electric buses. As transportation related GHG emissions account for nearly 14% of Türkiye's total emissions, it is aimed to supply necessary electric vehicle systems designed for public transportation for major municipalities of Türkiye. In addition to the development activities carried out with TEMSA and ANADOLU ISUZU, the sale of electric vehicle systems to BMC has started. In line with the expectations of the automotive industry, our mass production capabilities have been developed and effective cost management processes have been operated to meet expectations. Avenue EV, the Turkish automotive industry's first 100% domestic electric bus developed in cooperation with ASELSAN and TEMSA, set off from Samsun. On July 16, 2021, the contract for the Ultra Fast Charging Bus and Charging Infrastructure System Project was signed by the Metropolitan Municipality and ASELSAN. ASELSAN being a leading defense industry establishment developing advanced technology system solutions on land, air, naval and aerospace platforms, has given importance to Research and Development activities and technological gains and targets since it was founded. Besides, it aims to spend approximately 7% of the annual turnover to its Research and Development activities financed with its own resources. More than 6000 employees work in the six R&D centers within the company. ASELSAN's total R&D expense was 5615 million TRY in 2021.
Marginal abatement cost curve	The savings to be made in the narrative and reporting of many projects are also kept as information. For example, the financial impact in fuel savings, carbon emission reduction and how much of a reduction it corresponds in ASELSAN were examined in changing the fleet. The compatibility of this plan with the transition pathway, which is thought to be created for the 2050 road map, has been examined. In all investments made or to be made, a section is included in the

	reporting for the reduction in the continuous payments of this investment.
Compliance with regulatory requirements/standards	Changes made within the scope of ISO 50001 are made according to productivity index measurements. Engines that are observed to be inefficient are replaced and a budget is created for this. In order to measure the efficiency of engines and energy; methods such as classical productivity calculations, regression analysis, creating a specific index for certain parameters (m2, air temperature, number of employees, etc.) are used. An investment process is initiated to improve the process with efficiency below a certain value. For the preparation process of the European Green Deal, legal harmonization studies and legal product investments works on electric vehicles, that reflect new GHG reduction opportunities to our country are studied to drive investment.
Other Partnering with the Ministry on technology improvement by digitization	Many projects in the field of Smart Systems were signed and accepted in 2021. Within the frame of the project related to Toll Collection Systems, a total of five station acceptance activities was carried out. Software process of the Automated Unmanned Payment Systems R&D Project which will bring a different working principle in this field was brought to completion as well. This project will have an indirect positive contribution to GHG emissions reduction.
Internal incentives/recognition programs	Fields related to Productivity Increasing Project (VAP) studies were determined by conducting surveys and 5 Productivity Increasing Project (VAP) applications were approved by the Ministry of Energy and Natural Resources. For each project within the scope of VAP, 30% of the project amount will be paid to ASELSAN by the Ministry as an incentive.
Partnering with governments on technology development	Within the scope of the Sixth National Antarctic Science Expedition carried out by TÜBİTAK MAM Polar Research Institute, ASELSAN's domestic and national systems ensured the communication of our scientists in Antarctica. We became a part of this scientific research with our radio systems used in this voyage of discovery, where biodiversity is explored and new discoveries are expected.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Systems integration

Other, please specify

ENERGY MANAGEMENT and SMART GRID SYSTEMS

Description of product(s) or service(s)

System solutions consisting of critical hardware, algorithms and software for the National Smart Grid Network Management have been developed in order to transmit electricity efficiently, flexibly and effectively from the generation of electricity to its consumption throughout the country.

Within this scope, the development of the National Electric SCADA and the National Energy Management Systems continued successfully in 2021.For this purpose, collaborations have been established with different companies and universities. ARTU device, which is an advanced telemetry system used at the end points of smart grids, has started to be used in different networks- such as electricity, natural gas, oil, water, railways and micro-grids. It has proven itself in the operational environment. Activities to expand the DEPAR Low Voltage Monitoring and Control System developed for the conversion of the electricity distribution network into a smart grid were carried out.

With the ASELSAN Energy Business Intelligence Platform, it is aimed to monitor the energy consumption of the facilities instantly, to detect the anomalies with artificial intelligence and to achieve energy savings with the alarms and suggestions to be created. There is an analysis document showing that the suggestions made in the Van project-a pilot Project for a Water Management System in a small area- will increase the energy efficiency in the represented area by 32%. It will provide 32,559 kWh improvement per month.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Use stage

Functional unit used

kWh/month

Reference product/service or baseline scenario used

Internally modeled calculation methods

Life cycle stage(s) covered for the reference product/service or baseline scenario

Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

170

Explain your calculation of avoided emissions, including any assumptions

This improvement includes the water pump motors that our software recommends replacing. In the analyzes made, it has been revealed that one of the motors works with 47% efficiency and the other with 51% efficiency. This is not the optimal operating range of the pumps and is not healthy for the motors.
Discovering this result, our SCADA software offers suggestions for replacing motors. And with this change, the energy savings will be 32.559 kWh/month. This value shows that the investment to be made for the replacement of the engines will be amortized in about 6 months. Emission avoidance= 170 ton CO2-e/year.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Systems integration
Other, please specify
SCADA SYSTEMS

Description of product(s) or service(s)

Flexible, reliable, customization according to the needs and different fields accelerated the national SCADA development studies. Batman- Dörtyol Crude Oil Pipeline SCADA System Project, field installation and commissioning activities continued in 2021. Detailed design studies were completed by conducting field surveys along the pipeline route within the scope of the project. Conventional RTU produced by ASELSAN is used in the automation system, and SCADA is being used actively. The Scope of the Project has expanded, the works within the scope of the contract are planned to be completed

in 2022. Detailed design studies were completed by conducting field surveys along the pipeline route within the scope of the project.
The GHG emission base data is not provided by the third party due to confidentiality reasons.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

No

Methodology used to calculate avoided emissions

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Functional unit used

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

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Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

The EU Taxonomy for environmentally sustainable economic activities

Type of product(s) or service(s)

Systems integration

Other, please specify

Multi-lane Free Flow Electronic Toll Collection System (MLFF-ETC) which does not affect traffic on the highway

Description of product(s) or service(s)

Multi-lane Free Flow Electronic Toll Collection System (MLFF-ETC) which does not affect traffic on the highway during its operation, enables the collection of tolls from highways around large cities such as Istanbul, and also enables applications aimed at preventing traffic congestion resulting with high ghg emissions in urban roads, by introducing electronic road charging methods.
MLFF Vehicle recognition system, recognizes the license plate of a vehicles on the roadway. Vehicles of interest are identified and tracked throughout different system locations. MLFF system that allows highway users to pass through tolling point at high speed even when changing lanes without having to slow down to pay for toll.
New highway toll collection systems were established to cover the Çanakkale 1915 highway use, and crossings has been started in 2021.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Other, please specify

Internally modeled calculation methods

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Use stage

Functional unit used

MLFF system reduces congestion rate at the Toll Plazas by increasing vehicles' throughput at more than 1500 vehicles per hour. The research shows that the average delay on vehicle is 13 seconds per vehicle/ km (comparing to the MLFF).

Reference product/service or baseline scenario used

Scenarios used for different penetration rates.

Life cycle stage(s) covered for the reference product/service or baseline scenario

Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions

Congestion at MLFF is decreased at about %21 according to toll plazas. MLFF system reduces congestion rate at the Toll Plazas by increasing vehicles' throughput at more than 1500 vehicles per hour. The research shows that the average delay on vehicle is 13 seconds per vehicle/ km (comparing to the MLFF). In general, higher penetration rates give better results in term of emission reductions. On the highway road, modeled benefits at the macro level are 1.5% reduction in CO2 emissions for a %20 penetration rate, 4.5% reduction in CO2 emissions for a %60 penetration rate, 6.5% reduction in

CO2 emissions for a %90 penetration rate. Thus, MLFF improve public transportation and help to reduce air pollution, NOx and CO2 and road noise via a decline in traffic. With the establishment of new MLFF systems on the newly built roads of cities, the cumulative average vehicle speed on the roads where the wage was collected increased by 9%.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

0.4

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

The EU Taxonomy for environmentally sustainable economic activities

Type of product(s) or service(s)

Rail

Other, please specify

In this system, it will become possible to reduce the electricity consumption of railway transportation vehicles and allow railway vehicles to be operated without a catenary system. allowing energy savings of up to 30% on public railway lines.

Description of product(s) or service(s)

ASELSAN has begun its activities to develop the energy management system which improves efficiency for railway transportation vehicles and reduces costs. In this system, it will become possible to reduce the electricity consumption of railway transportation vehicles and allow railway vehicles to be operated without a catenary system. With its modular structure, which can be used in both the vehicle and the station, the Energy Management System (EMS) allows railway vehicles, particularly trams, to be operated without a catenary system, allowing energy savings of up to 30% on public railway lines. In this context, the Energy Management System has been developed in order to store the braking energy in the Hybrid Shunting Locomotive, to achieve emission-free operation in the close areas, to reduce the noise level and to ensure fuel saving.
In urban applications e.g. Metro, 200.000 km distances are covered annually. In the maneuvering locomotive, high distances are covered in parallel with the frequency of use. In this way, ASELSAN solutions for hybrid electric vehicles and hybrid rail vehicles also contribute to reducing emission values. It is aimed to save 40% fuel in the hybrid maneuvering locomotive being developed, an average of 20-30% reduction in CO emissions and an average 30-40% reduction in CO2 emissions.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Other, please specify

Internally modeled calculation methods

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Use stage

Functional unit used

Consumption data per hour was calculated separately at load and idle phase.
Daily working hours were found

Reference product/service or baseline scenario used

These climate resilient goods and services will allow third party to avoid emissions, % revenue is not categorized.
The ERCI Innovation Awards, organized for the sixth time this year by the European Railway Clusters Initiation (ERCI), evaluate the leading innovation projects of European railway industry companies and reward the best selected projects.
ASELSAN was deemed worthy of the “Best Large-Scale Company” Award with MIDAS-R.

Life cycle stage(s) covered for the reference product/service or baseline scenario

Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

644

Explain your calculation of avoided emissions, including any assumptions

According to the shunting locomotive operating statistics published by the EPA, it has been observed that these locomotives spend 60% of their working life while idling 40%. Current fuel consumption is calculated using idle and running fuel consumption values. A total working period of 16 hours per day was used, and calculations were made over 330 days per year. The specific gravity of diesel is taken as 0.84 kg/lt. 644 ton CO2-e/year figure represents only one locomotive.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

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Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

The EU Taxonomy for environmentally sustainable economic activities

Type of product(s) or service(s)

Road

Other, please specify

First domestic electric bus. A traction system has been developed for electric buses.

Description of product(s) or service(s)

The Electric Vehicle Systems Program Management Department started a project with TEMSA in March 2015 with the aim of producing the first domestic electric bus. A traction system has been developed for electric buses. Within the scope of the system, electric traction motor, motor driver (inverter), power distribution unit, high voltage battery system, vehicle control unit, driver instrument panel and vehicle charge control unit were developed by ASELSAN. These units were integrated into a bus developed together with TEMSA, and a domestic bus with the entire traction system was produced and type approval was obtained. Developed with the cooperation of TEMSA and ASELSAN, the bus is also important in terms of creating a sustainable ecosystem in this area with its locality rate of over 65%. Vehicle level emission is zero. It has become possible to bring the total emissions closer to zero, with electricity generation being directed towards renewable energy technologies.It will provide financial returns with the widespread use from 2021.

Project development period labor and material costs is around 9 million USD

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Use stage

Functional unit used

emission / liter

Reference product/service or baseline scenario used

10/10 new electric buses will be supplied to Samsun Metropolitan Municipality in 2 phases.

Although the lines of the buses are different, they have an average line length of 300 km and a consumption of 50 l/100 km per day.

Life cycle stage(s) covered for the reference product/service or baseline scenario

Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

2,700

Explain your calculation of avoided emissions, including any assumptions

10/10 buses will be supplied to Samsun Metropolitan Municipality in 2 phases. Although the lines of the buses are different, they have an average line length of 300 km and a consumption of 50l/100km per day.
According to the calculation made, 1,095,000 liters of fossil fuel consumption per year will be prevented.
Electric buses will consume 3,285,000 kW of electricity in return.
In 2021, a revenue of 1.5 m USD was generated in the sale to a project outside of Samsun Metropolitan Municipality.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

0

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

The EU Taxonomy for environmentally sustainable economic activities

Type of product(s) or service(s)

Road
Other, please specify
CITY TRAFFIC CONTROL AVOIDING TRAFFIC JAM RELATED EMISSIONS

Description of product(s) or service(s)

CITY TRAFFIC CONTROL AVOIDING TRAFFIC JAM RELATED EMISSIONS,
Junction control devices communicate with each other and provide traffic management both at the intersection and at the city level. Unlike the use of predetermined plans, which is the method generally used in the industry, the system works in real time with a fully adaptive model. By using various sensors and image processing technologies such as cameras and “loop” detectors, the duration of traffic lights at intersections is determined instantly with the vehicle density information coming from the intersections. For example, if there is no vehicle in one of the intersection arms, the green light does not turn on for that direction in order to increase the efficiency of the traffic flow.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Other, please specify
Internally modeled calculations

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Use stage

Functional unit used

emission/ liter

Reference product/service or baseline scenario used

By using various sensors and image processing technologies such as cameras and “loop” detectors, the duration of traffic lights at intersections is determined instantly with the vehicle density information coming from the intersections. For example, if there is no vehicle in one of the intersection arms, the green light does not turn on for that direction in order to increase the efficiency of the traffic flow.
Data: Annual 331,385 kg CO2 emissions at the Station Junction in Kırıkkale Project

Life cycle stage(s) covered for the reference product/service or baseline scenario

Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

4,968

Explain your calculation of avoided emissions, including any assumptions

According to the data collected at the same time periods before and after the use of the intersection control device at the designated intersections, there was a 19% increase in the average speed of the vehicles and a 21% decrease in the average number of stops per vehicle at the Station.
This project has started to be implemented in the cities of Samsun and Tekirdağ. Emission reduction assumptions will be re-studied and re-calculated.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

No taxonomy used to classify product(s) or service(s) as low carbon

Type of product(s) or service(s)

Other

Other, please specify

The Serçe UAV system can be used within the scope of providing heat maps within the scope of forest fires, control of agricultural areas, surveillance of power lines and oil pipelines.

Description of product(s) or service(s)

The Serçe UAV system can be used within the scope of providing heat maps within the scope of forest fires, control of agricultural areas, surveillance of power lines and oil pipelines, thanks to the thermal and daytime camera on it, which can be carried and

used by a single person. Support can be provided to extinguishing/cooling works by detecting the areas that have not lost their heat yet and that are at risk of re-burning during the fire extinguishing works with a thermal camera.
Within the scope of the work carried out with the General Directorate of Forestry, support was given to extinguishing the fires in Çanakkale in 2020.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

No

Methodology used to calculate avoided emissions

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Functional unit used

Reference product/service or baseline scenario used

Life cycle stage(s) covered for the reference product/service or baseline scenario

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

Explain your calculation of avoided emissions, including any assumptions

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

No

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in boundary	The reporting year's boundary has been changed due to revision of ISO 14064. The updated standard, ISO 14064-2018 requires a category base emission classification in indirect emissions (part: scope 3) This requirement was applied to the system during the new version. The third-party verification is completed.

C5.1c

(C5.1c) Have your organization's base year emissions been recalculated as result of the changes or errors reported in C5.1a and C5.1b?

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	No, because the operations acquired or divested did not exist in the base year	We plan to do comparisons next year, structural or boundary changes will be clear after 2022.

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1, 2016

Base year end

December 31, 2016

Base year emissions (metric tons CO2e)

14,690

Comment

In 2015, the Gölbaşı Facility started its operations and the system boundary was revised accordingly.
In the reporting year another new facility Akyurt 2 started its operations.
The system boundary is the same as in 2015.

Scope 2 (location-based)

Base year start

January 1, 2016

Base year end

December 31, 2016

Base year emissions (metric tons CO2e)

42,320

Comment

Only location-based result was used, there is no market-based figure.
The system boundary is the same as in 2015.

Scope 2 (market-based)

Base year start

January 1, 2016

Base year end

December 31, 2016

Base year emissions (metric tons CO2e)

Comment

There is no market- based figure.

Scope 3 category 1: Purchased goods and services

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

22,565.15

Comment

Within the transition to ISO 14064:2018 version in 2021, a detailed study of scope 3 emissions was made. Data collection systematic has been changed and thus reporting boundaries have been expanded. Since there is no other comparison for this scope related to new boundary, base year selection will be reviewed after the calculations related with 2022 data.

Scope 3 category 2: Capital goods

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

Comment

Green procurement process is in the concern of our company. The company does not have the information and inventory to account for these emissions associated with this source.
ASELSAN does not predict the full inclusion over a three years period.

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

7,212.43

Comment

DEFRA -WTT fuel conversion factors were used to account for the upstream Scope 3 emissions associated with extraction, refining and transportation of the raw fuel sources to the organisation’s site, prior to combustion.
The activity data was collected from the third- party energy invoices

Scope 3 category 4: Upstream transportation and distribution

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

1,263.49

Comment

Within the transition to ISO 14064:2018 version in 2021, a detailed study of scope 3 emissions was made. Data collection systematic has been changed and thus reporting boundaries have been expanded. Since there is no other comparison for this scope related to new boundary, base year selection will be reviewed after the calculations related with 2022 data.
All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards).

Scope 3 category 5: Waste generated in operations

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

116.9

Comment

Within the transition to ISO 14064:2018 version in 2021, a detailed study of scope 3 emissions was made. Data collection systematic has been changed and thus reporting boundaries have been expanded. Since there is no other comparison for this scope, base year selection will be reviewed after the calculations related with 2022 data.

Scope 3 category 6: Business travel

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

1,623.31

Comment

Within the transition to ISO 14064:2018 version in 2021, a detailed study of scope 3 emissions was made. Data collection systematic has been changed and thus reporting boundaries have been expanded. Since there is no other comparison for this scope related to new boundary, base year selection will be reviewed after the calculations related with 2022 data.
All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards).

Scope 3 category 7: Employee commuting

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

971.14

Comment

Within the transition to ISO 14064:2018 version in 2021, a detailed study of scope 3 emissions was made. Data collection systematic has been changed and thus reporting boundaries have been expanded. Since there is no other comparison for this scope related to new boundary, base year selection will be reviewed after the calculations related with 2022 data.
All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards).

Scope 3 category 8: Upstream leased assets

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

We did not use upstream leased assets in 2021

Scope 3 category 9: Downstream transportation and distribution

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

34.04

Comment

Downstream shipping activities covering the entire transport cycle of the supply chain will be improved thanks to the "Supplier Portal" in the next 2 years. Access on accurate and valid data will be completed.
All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards).

Scope 3 category 10: Processing of sold products

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

Comment

Specific confidentiality constraints prohibiting the disclosure

Scope 3 category 11: Use of sold products

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

Comment

Specific confidentiality constraints prohibiting the disclosure

Scope 3 category 12: End of life treatment of sold products

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

0

Comment

NA

Scope 3 category 13: Downstream leased assets

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

Comment

We did not use downstream leased assets in 2021

Scope 3 category 14: Franchises

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

Comment

We do not have any franchises, so this category is not relevant to our organization.

Scope 3 category 15: Investments

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

Comment

NA

Scope 3: Other (upstream)

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

Comment

NA

Scope 3: Other (downstream)

Base year start

January 1, 2021

Base year end

December 31, 2021

Base year emissions (metric tons CO2e)

Comment

NA

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

Defra Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance, 2019
IPCC Guidelines for National Greenhouse Gas Inventories, 2006
ISO 14064-1
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
The Greenhouse Gas Protocol: Scope 2 Guidance

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

15,481.32

Comment

The data cover Scope 1 GHG emissions of all facilities located in Ankara and İstanbul

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

Comment

In ASELSAN, only the electricity purchased from National Interconnected System Grid is consumed.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

37,926.6

Comment

This figure represents the purchased electricity from National Interconnected System. ASELSAN do not have any source of market-based Scope 2 emissions

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

22,565.15

Emissions calculation methodology

Supplier-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Data cover the emissions from the use of goods and services purchased from main subsidiaries and suppliers.
Data collection process from suppliers is being improved.

Supplier specific method is in developing phase with the new Portal. In site visits to subsidiaries are in progress phase.
Next year the number of site visits will increase.
GHG emissions caused by used materials such as plastics, metals, paper, etc. are calculated by using the weight, and emission factors of used materials. Emissions were calculated using DEFRA GHG Conversion Factors for Company Reporting. (DEFRA Greenhouse Gas Reporting: Conversion Factors 2021)
All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards).

Capital goods

Evaluation status

Not relevant, explanation provided

Please explain

Green procurement process is in the concern of our company. The company does not have the information and inventory to account for these emissions associated with this source.
ASELSAN does not predict the full inclusion over a three years period.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

7,212.43

Emissions calculation methodology

Hybrid method
Fuel-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

DEFRA -WTT fuel conversion factors were used to account for the upstream Scope 3 emissions associated with extraction, refining and transportation of the raw fuel sources to the organisation’s site, prior to combustion.
The activity data was collected from the third- party energy invoices.
Upstream emissions of purchased fuels such as Natural gas, LPG, Diesel etc. were calculated.
Transmission & distribution losses arising from purchased electricity were calculated using approved electricity emission factor for Türkiye and TEIAŞ statistics)
All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards).

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1,263.49

Emissions calculation methodology

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

DEFRA – Freighting Goods 2021 emission factors were used for calculations based on the GHG Protocol Corporate Value Chain (Scope 3) Standard.
In 2021 this process was revised; the system boundary was enlarged before the transition to new ISO 14064:2018 Standard.
All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards).

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

116.9

Emissions calculation methodology

Waste-type-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Waste generated in operations is calculated based on Defra 2021 methodology on Waste Disposal.
Wastewater generated from operations is calculated based on Defra 2021 methodology on Water Treatment.
All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards).

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

1,623.31

Emissions calculation methodology

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

The assessment and the data gathering process is in place. Air travel based emission is calculated based on DEFRA 2021 methodology for Business Travel-Air.
The data is provided from ASELSAN's Travel Supplier.
All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards).

Employee commuting

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

971.14

Emissions calculation methodology

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Employee commuting based data is calculated based on DEFRA 2021 methodology for Business Travel- Land
All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards).

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

We did not use upstream leased assets in 2021

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

34.04

Emissions calculation methodology

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

DEFRA – Freighting Goods 2021 emission factors were used for calculations based on the GHG Protocol Corporate Value Chain (Scope 3) Standard.
Downstream shipping activities covering the entire transport cycle of the supply chain will be improved thanks to the "Supplier Portal" in the next 2 years. Access on accurate and valid data will be completed.
All calculations are completed in accordance with ISO 14064-1:2018 and verified in accordance with ISO 14064-3:2019 standards).

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Specific confidentiality constraints prohibiting the disclosure

Use of sold products

Evaluation status

Not relevant, explanation provided

Please explain

Specific confidentiality constraints prohibiting the disclosure

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Please explain

N/A

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

We did not use downstream leased assets in 2021

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

We do not have any franchises, so this category is not relevant to our organization.

Investments

Evaluation status

Not relevant, explanation provided

Please explain

GHG emissions of new facility investments will be accounted in Scope 1&2 emissions.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

N/A

Other (downstream)

Evaluation status

Not relevant, explanation provided

Please explain

N/A

C-CG6.6

(C-CG6.6) Does your organization assess the life cycle emissions of any of its products or services?

	Assessment of life cycle emissions	Comment
Row 1	No, but we plan to start doing so within the next two years	ASELSAN is aware that the Scope 3 inventory enables us to identify the GHG reduction opportunities across the entire corporate value chain, while product life cycle assessment enables a company to target individual products with the greatest potential for reductions. For the next 2 years we plan to start assessment of life cycle emissions for one product group. This subject will be studied for some selected product group after the transition to ISO 14064: 2018 Standard. The Product Life Cycle System, expressed as PLM (Product Lifecyle Management), which can be considered one of the milestones for ASELSAN, is the most important part of ASELSAN's digital

		transformation included in the ASELSAN Strategic Plan for this purpose. PLM will prepare ASELSAN for the future by providing the infrastructure for the concurrent engineering method that enables interactive and efficient work from design to production, from program management to integrated logistics support. The design teams may take environmental issues into account in the early design phase and may give the company a global vision about their product portfolios with the ASELSAN PLM Project.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.0000027

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

53,407.93

Metric denominator

unit total revenue

Metric denominator: Unit total

20,138,952,878

Scope 2 figure used

Location-based

% change from previous year

25.08

Direction of change

Decreased

Reason for change

Although our business growth rate was increased 20% in terms of revenue, there is a 6.31 % decrease on the basis of absolute emissions (S1+S2). This result stems from our ambitious and consistent approach to emission reduction.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	10,810.641	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	7.423	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	33.611	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	4,629.647	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Turkey	15,481.32

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By facility

By activity

C7.3b

(C7.3b) Break down your total gross global Scope 1 emissions by business facility.

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Macunköy	5,056.88	39.96763	32.76631
Akyurt 1	5,725.41	40.08628	33.02409

Akyurt 2	230.18	40.51025	33.1184
Gölbaşı	4,150.41	39.71837	32.81612
Teknokent ODTÜ	0	39.89353	32.77346
Teknokent ODTÜ (Titanyum)	26.18	39.8934	32.7713
Teknokent-Hacettepe	1.34	39.863	32.7378
Teknopark-Ivedik	29.6	39.9961	32.7521
Teknopark- İstanbul	94.04	40.8513	29.28764
Şişli	167.27	41.05613	28.98536

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Natural Gas Consumption for heating, boilers and kitchen	8,646.025
Diesel consumption for generators and fire pumps	268.726
LPG consumption at kitchen	0.034
CNG consumption in the production process	0
Gasoline consumption for company cars	0
Diesel oil consumption for company cars	1,905.938
Diesel oil consumption for forklifts	29.975
Fugitive emissions from air conditioning system	1,904.053
Fugitive emissions from fire extinguishers	2,726.574

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Turkey	37,926.6	

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By facility

C7.6b

(C7.6b) Break down your total gross global Scope 2 emissions by business facility.

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Macunköy	14,240.02	
Akyurt 1	11,457.03	
Akyurt 2	838.43	
Gölbaşı	10,322.92	
Teknokent ODTÜ	395.3	
Teknokent- ODTÜ (Titanyum)	139.84	
Teknokent- Hacettepe	136.56	
Teknopark-İvedik	302.39	
Teknopark- İstanbul	46.98	
Şişli	47.13	

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	0	No change		
Other emissions reduction activities	572	Decreased	1.07	The emissions activities implemented during 2021 have been resulted with a reduction of 572 tons of CO2e. We calculated 6.47 through (-572/53,407.93) *100 = -1.07%
Divestment	0	No change		
Acquisitions	0	No change		

Mergers	0	No change		
Change in output	0	No change		
Change in methodology	2,877.14	Decreased	5.39	Previous year the electricity emission factor used in the calculation referred to IEA 2018 Report. This year in line with the update of IEA, we started to use, IEA 2021 Report emission factor in our inventory calculation. In IEA 2018 Report, the emission factor was 0.0004661 and in IEA 2021 Report, the emission factor is 0.0004331. Calculation (2,877.14/53,407.93) *100 = 5.39%
Change in boundary	0	No change		
Change in physical operating conditions	0			
Unidentified	0	No change		
Other	152.06	Decreased	0.28	The reason of the change in the emission sources: The major items which has the highest impact on the change are electricity and natural gas consumption. The electricity consumption is 2.96% and natural gas consumption is 11.67% lower compared to previous year. The reason of this decrease: In the reporting year as required by ISO 50001 the company implemented energy efficiency projects. On the other side, New additional fire extinguishers were procured in Akyurt facility. HFC-236 fa gas is used in the fire extinguisher system. This investment has been a source of increase in the emissions, limited to one time. The amount of increase in emissions is 2,098.46 tons of CO2-e.

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C-CG7.10

(C-CG7.10) How do your total Scope 3 emissions for the reporting year compare to those of the previous reporting year?

Increased

C-CG7.10a

(C-CG7.10a) For each Scope 3 category calculated in C6.5, specify how your emissions compare to the previous year and identify the reason for any change.

Purchased goods and services

Direction of change

First year of reporting this category

Fuel and energy-related activities (not included in Scopes 1 or 2)

Direction of change

Decreased

Primary reason for change

Other emissions reduction activities

Change in emissions in this category (metric tons CO2e)

293.81

% change in emissions in this category

4

Please explain

The main reason of the decrease is emission reduction activities due to ISO 50001 efficiency improvement projects.
Third party verification of 2021 has been completed.

Upstream transportation and distribution

Direction of change

Increased

Primary reason for change

Change in boundary

Change in emissions in this category (metric tons CO2e)

907.35

% change in emissions in this category

71.8

Please explain

Due to the transition to ISO 14064-2018, reporting boundaries have been expanded.
The data in the relevant category was collected from the supplier.
Third party verification of 2021 has been completed.

Waste generated in operations

Direction of change

Decreased

Primary reason for change

Other, please specify

Operational improvements and zero waste practices

Change in emissions in this category (metric tons CO2e)

121.89

% change in emissions in this category

51

Please explain

Operational improvements and zero waste practices are the main activities to reduce the emissions of this category.
Third party verification of 2021 has been completed.

Business travel

Direction of change

Increased

Primary reason for change

Other, please specify

Business travel by air increased after COVID-19 pandemic precautions

Change in emissions in this category (metric tons CO2e)

232.88

% change in emissions in this category

14

Please explain

Business travel by air increased after COVID-19 pandemic precautions.
Third party verification of 2021 has been completed.

Employee commuting

Direction of change

Decreased

Primary reason for change

Other emissions reduction activities

Change in emissions in this category (metric tons CO2e)

175.61

% change in emissions in this category

15

Please explain

Route optimization studies for the purpose to reduce mobility base emissions.
Third party verification of 2021 has been completed.

Downstream transportation and distribution

Direction of change

First year of reporting this category

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No

Generation of electricity, heat, steam, or cooling	No

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)		51,737.9	51,737.9
Consumption of purchased or acquired electricity			87,185.9	87,185.9
Total energy consumption			138,923.8	138,923.8

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value

LHV

Total fuel MWh consumed by the organization

0

Comment

We have not consumed any fuels within this category in the reporting year.

Other biomass

Heating value

LHV

Total fuel MWh consumed by the organization

0

Comment

We have not consumed any fuels within this category in the reporting year.

Other renewable fuels (e.g. renewable hydrogen)

Heating value

LHV

Total fuel MWh consumed by the organization

0

Comment

We have not consumed any fuels within this category in the reporting year.

Coal

Heating value

LHV

Total fuel MWh consumed by the organization

0

Comment

We do not consume any fuels within this category.

Oil

Heating value

LHV

Total fuel MWh consumed by the organization

8,142.31

Comment

The figure covers the diesel oil consumed in the reporting year.

Gas

Heating value

LHV

Total fuel MWh consumed by the organization

43,595.58

Comment

The figure covers the Natural gas and LPG consumed in the reporting year.

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

LHV

Total fuel MWh consumed by the organization

0

Comment

We have not consumed any fuels within this category in the reporting year.

Total fuel

Heating value

LHV

Total fuel MWh consumed by the organization

51,737.9

Comment

The figure covers total fuel consumed by ASELSAN

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area

Turkey

Consumption of electricity (MWh)

87,185.9

Consumption of heat, steam, and cooling (MWh)

51,737.9

Total non-fuel energy consumption (MWh) [Auto-calculated]

138,923.8

C-CG8.5

(C-CG8.5) Does your organization measure the efficiency of any of its products or services?

	Measurement of product/service efficiency	Comment
Row 1	Yes	Many of our products contain smart components. All parameters related to efficiency measurement are measured, evaluated and recorded by sensors and smart units in the systems. These data can be analysed later to measure efficiency.

C-CG8.5a

(C-CG8.5a) Provide details of the metrics used to measure the efficiency of your organization's products or services.

Category of product or service

Power tools

Product or service (optional)

Hybrid Energy System including battery, power panel and wind turbine

% of revenue from this product or service in the reporting year

0.02

Efficiency figure in the reporting year

0.7

Metric numerator

megawatt hour (MWh)

Metric denominator

Other, please specify

kilowatt hour (kWh)

Comment

The ratio of the energy produced by the Hybrid Energy System from its own renewable energy sources, to the total consumed energy is evaluated as efficiency. The efficiency figure is 70% in the reporting year.

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description

Waste

Metric value

1,807

Metric numerator

Tonnes of waste

Metric denominator (intensity metric only)

NA

% change from previous year

2.9

Direction of change

Decreased

Please explain

ASELSAN manages the waste generated from its operations by taking the waste management hierarchy into account, in a manner that minimizes their environmental impacts. This management approach starts by reducing waste at the source and continues with waste reuse, recycling and disposal as a last resort. The verification of regularly reported wastes to MoEU&CC is fulfilled by the 3rd party audit for 2021 activities. In order to prevent and minimize waste generation and ensure recycling, ASELSAN started to work voluntarily in May 2019 to implement the "Zero Waste Project" in all its campuses. The training was given to all workers and related staff who will take an active role in waste separation /collection.

Description

Other, please specify

Waste water discharged into sewer system

Metric value

318,082

Metric numerator

Cubic meter of waste water

Metric denominator (intensity metric only)

NA

% change from previous year

8.3

Direction of change

Increased

Please explain

The full-time employee figure has increased after the expansion activities.

Description

Energy usage

Metric value

51,737.9

Metric numerator

MWh from non-renewable sources

Consumption of fuel

Metric denominator (intensity metric only)

NA

% change from previous year

11.7

Direction of change

Decreased

Please explain

In the context of ISO 50001, there has been improvement thanks to efficiency-enhancing improvement projects.

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	ASELSAN aims to strengthen its position as the leading company in the industry by adding advanced technology such as augmented reality, artificial

		intelligence and similar capabilities to autonomous aircraft in the future. Research projects on sensing and planning technologies to increase the autonomy level of unmanned aerial vehicles are carried out at the ASELSAN Research Centre. In addition, intelligent control methods are being developed for energy efficiency in unmanned systems and for unmanned aerial vehicles to perform their operations with more agile maneuvers. Another field of activity carried out to support civil applications in the field of space is cube satellites. In this area, the first ASELSAT cube satellite project was carried out. Through remote sensing applications, it is aimed to continue with cost and calendar effective satellite development studies for civilian applications in areas such as Meteorology, Agriculture, Disaster and Emergency Management. One of the main fields of activity of our company is renewable energy systems. For the purpose to drive opportunities in this new system, ASELSAN has already begun to position as a leader in technology base projects in order to meet the needs of all stakeholders in the global energy systems market with efficient, reliable, economic, high quality state of- the-art products and services in the areas of electricity generation, transmission, distribution, consumption and management. ASELSAN has established programs for the R&D, design, production, integration and after sales support in the following areas: · Energy Management and Smart Grid Systems · Renewable Energy Systems. - e-mobility, e-charging Development of system, software and hardware components for national and international markets have been targeted in the field of smart grids, in order to provide solutions for the monitoring, optimization and management of generation, transmission, distribution and consumption of energy systems for energy sector. In this context, renewable energy projects with own resources and contracts are carried out and the necessary investments are made. 3 reporting years'(2019-2021) successive total expenditure on R&D activities are: 2975 million, 3356 million and 5615 million TRY.

C-CG9.6a

(C-CG9.6a) Provide details of your organization's investments in low-carbon R&D for capital goods products and services over the last three years.

Technology area

Renewable energy

Stage of development in the reporting year

Large scale commercial deployment

Average % of total R&D investment over the last 3 years

41 - 60%

R&D investment figure in the reporting year (optional)

Comment

ASELSAN makes the necessary investments within the scope of the projects without delay. Annual maintenance and calibrations of investments are constantly monitored. Technological trends are closely followed and new investments are planned and implemented. For example; The project for the original development of generator and full-scale power converter units, which are critical components of the Wind Turbine, has been launched. In order to test these study outputs, an investment activity of over MW Scale Power Electronics and Electrical Machines Laboratory is carried out.
Within the scope of renewable energy and all other projects, many investments are needed to be used in design, development, test and verification activities. For example; Various computer aided software tools were provided to be used within the scope of design activities (Homer, PVSol Matlab etc.). Similarly, investments were made for measurement and testing purposes (Lidar, dynamo-meter, PV simulator etc. for wind measurement)

Technology area

Smart systems

Stage of development in the reporting year

Applied research and development

Average % of total R&D investment over the last 3 years

≤20%

R&D investment figure in the reporting year (optional)

Comment

Micro-grids are small-scale energy networks that can be operated independently or connected to the grid, have their own energy sources, generation and loads with certain limits. Micro-grids have advantages such as providing energy in off-grid regions with on-site generation, reducing inter-regional transmission losses, increasing service quality by detecting faults instantly, using resources efficiently by supporting demand management, commissioning more domestic resources, and having a more durable and dynamic network.
The development and nationalization of micro-grids, of which there are many examples in the world, is critical for a green sustainable energy in the near future and reduces foreign dependency in order to ensure energy security. Smart micro grids will ensure stability, efficiency and energy security. Also, the use of renewable resources in micro-

grids more and more will expand in this way.
In this context, Cyprus Advanced Technologies Research Center under R&D Vice Presidency continues its pre-studies on smart micro-grids.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement

Aselsan_14064 VOS FINAL_for 2021_Ver01.pdf

Page/ section reference
2021 ASELSAN Carbon Footprint Verification Opinion Statement Scope 1 and 2 (Page 3)

Relevant standard
ISO14064-3

Proportion of reported emissions verified (%)
100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Aselsan_14064 VOS FINAL_for 2021_Ver01.pdf

Page/ section reference

2021 ASELSAN Carbon Footprint Verification Opinion Statement Scope 1 and 2 (Page 3)

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category

Scope 3: Purchased goods and services
Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
Scope 3: Upstream transportation and distribution
Scope 3: Waste generated in operations
Scope 3: Business travel
Scope 3: Employee commuting
Scope 3: Downstream transportation and distribution

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Aselsan_14064 VOS FINAL_for 2021_Ver01.pdf

Page/section reference

2021 ASELSAN Carbon Footprint Verification Opinion Statement Scope 3 (Page 3)

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

No, but we are actively considering verifying within the next two years

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

No, but we anticipate being regulated in the next three years

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

The EU emissions trading scheme (EU-ETS) has been the region's key policy tool for containing rising greenhouse gas emissions over the past two decades, and remains a fundamental pillar of the EU Green Deal, which commits the region to reach carbon neutrality by 2050. Türkiye is taking steps to prepare its economy for closer ties with EU legislation, while Türkiye does not yet have carbon pricing systems in place, it has started to explore opportunities to implement a National Emissions Trading Scheme. The two main policy options

that are being used as carbon pricing mechanisms are carbon taxation and emissions trading systems (ETS).
In November 2018 a synthesis report was submitted to the Climate Change and Air Management Coordination Board, outlining possible carbon market policy options for Türkiye. Following this, the end of the year saw the completion of the primary phase, and beginnings of the second phase of the plan. The second phase, which was completed at the end of 2020 – includes:
· Development of a 'Climate Change Law', ETS regulation and institutional framework for a pilot ETS
· Development of the pilot ETS cap and preliminary specifications for MRV sectors
· Development of Turk-SIM (an ETS digital simulation with gamification features)
· Development of the pilot ETS transaction registry
· Assessment of Article 6 Paris Agreement implications and options for Türkiye
ASELSAN states her corporate views on these issues. Several number of stakeholder meetings and feedback rounds were conducted by the MoEU&CC in 2021.
In Türkiye, emission data is reported to the Ministry annually by high energy intensive sectors according to the MRV regulation. ASELSAN is not in the scope of this regulation yet. However, since we have established our ISO 14064-1 system and have been calculating our emissions and processing verification by accredited third parties, we are ready to report our emissions. We anticipate that the Ministry will include after 2023, the pilot sectors which are in the scope of MRV Regulation, first.
We are ready to comply with the schemes when the market is once established in Türkiye. National ETS or taxation system can influence our company after 2024.
As part of our involvement in this new upcoming system, our energy efficiency was upgraded with Energy Management Systems, ISO 50001:2018. The ISO 14064:2018 transition was completed. For the 3 main facilities, the energy efficiency projects started to be implemented as from the second quarter of 2019.
Energy analyzers have been set up to accelerate improvement projects.
The company shares its expertise and perspective to the policy-making process on high priority emerging Climate Law and ETS regulation. The regulatory compliance team monitors regulatory developments, establishes procedures, carries out data review and internal audits. A cross functional team of environmental and energy efficiency experts exert and maintain the strategy. The communication with the Board is always performed with related meetings.
The company will continue to attend related workshops for the alignment of its strategy with the incoming National Strategy covering ETS regulation and other requirements of Paris Agreement. The first attendance on National Council workshops on National Climate Strategy was done by ASELSAN.
For the purpose to be ready for such carbon pricing mechanism before it is introduced, the company works with the policy makers to mitigate its GHG emissions to be resilient to the anticipated potential impacts in the long-term
For the purpose to drive opportunities in this new system, ASELSAN has already begun to position as a leader in technology base projects in order to meet the needs of all stakeholders in the global energy systems market with efficient, reliable, economic, high-quality state of- the-art products and services in the areas of electricity generation, transmission, distribution, consumption and management.

ASELSAN has established programs for the R&D, design, production, integration and after sales support in the following areas:
· Energy Management and Smart Grid Systems
· Renewable Energy Systems. (e-mobility, e- charge)
-SCADA system improvements and usage, surveillance, communication for biodiversity, fire prevention systems
- Other design system analysis for circular economy

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase

Credit purchase

Project type

Wind

Project identification

ASELSAN received carbon credits that have been verified by a third-party verification company in compliance with the Gold Standard. Since there is not any regulatory emission trading scheme in Türkiye, project is initiated as voluntary offsetting project. The retirement of 3 Verified Emission Reductions (VERs) for Zorlu Enerji Elektrik Üretim A.Ş. on 14/10/2021 from Demirciler Wind Power Plant was completed. This project was ASELSAN's 2021 Sustainability Workshop Carbon Neutral Event.

Verified to which standard

Gold Standard

Number of credits (metric tonnes CO2e)

3

Number of credits (metric tonnes CO2e): Risk adjusted volume

3

Credits cancelled

No

Purpose, e.g. compliance

Voluntary Offsetting

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

Navigate GHG regulations
Stakeholder expectations
Change internal behavior
Drive energy efficiency
Drive low-carbon investment
Identify and seize low-carbon opportunities

GHG Scope

Scope 1
Scope 2

Application

For the purpose to diminish the absolute company-wide total GHG emissions, we have a target to purchase voluntary certified carbon credits. for S1&S2 emissions. At the first time of the period when the decision to start the project will be taken, it will start with Scope 2 emission.
The actual price figure provided was used as the purpose of offsetting our emissions. It is used as shadow price in some calculations.

Actual price(s) used (Currency /metric ton)

735

Variance of price(s) used

The EU Green Deal would counteract the risk of carbon leakage by putting a carbon price on imports of certain goods from outside the EU. Base on Green Deal- Carbon Border Adjustment mechanism, increased pricing on imported goods is considered a key regulatory-driven climate risk at ASELSAN.
"The New Climate Regime through the Lens of Economic Indicators" Report discusses the impacts of CBA on the Turkish industry with economic models. It was launched in September 2020, with the participation of the Minister of Environment and Urbanization and Chief Climate Negotiator. Base on general balance model, possible costs of Border Carbon Regulation for 30€ & 50 € /ton CO2-e price in export and production categories of different industry sectors was assessed for 2020-2030 period. For ASELSAN the likelihood of a carbon border adjustment based tax is expected to have a long term effect on operational costs in the future. We closely monitor compliance with this emerging regulation and other critical climate policies. Internally the Evolutionary pricing

is used.
The price used is min 441 TRY for 30 € and max 735 TRY for 50 €
(As average currency 1€=14,7 TRY in 2021)

Type of internal carbon price

Shadow price
Offsets

Impact & implication

The financial impact of this voluntary activity is low, it will not impact our business. This study enables the company to define also climate related emerging regulation-based risks.
The price on carbon influences the decision-making processes for our current strategies and future energy demand. One of the strategic opportunities of ASELSAN is to make new investments in renewable technologies.
This tool shifted also the investments toward energy efficiency measures in our facilities. ASELSAN prioritizes green building designs in new buildings in line with the Principle of Energy Efficient Design. ASELSAN aims to receive a Gold certificate with the green solutions implemented in the Istanbul Teknopark building, which is under construction and planned to be operational in 2023.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers
Yes, our customers/clients
Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

50

% total procurement spend (direct and indirect)

75

% of supplier-related Scope 3 emissions as reported in C6.5

40

Rationale for the coverage of your engagement

With the belief of being a responsible producer for responsible consumption, we try to improve our entire value chain while managing our business continuity risk. Our domestic companies constitute a very important part of our company's over 5,000 suppliers and our nationalization efforts are continuing rapidly. We communicated with 50% of our local companies on climate change issues, get information from them and try to support the improvement of their processes.

Our suppliers' performance has a significant impact on the management of economic, social and environmental (ESG) issues of our company.

The rational for the coverage of this survey is Assessment of Suppliers which have an impact on total procurement spent. ASELSAN has created a pioneering and innovative platform in order to strengthen the bond with its suppliers, to reduce foreign dependency by increasing the effectiveness of nationalization efforts, and to carry out cooperation with its suppliers under an integrated roof. Gücümüz Bir platform went live in April 2020. It is an interactive platform that the target audience is ASELSAN's current and potential suppliers. This platform serves through a corporate website and mobile applications.

ASELSAN contacts supply chain stakeholders to manage the inventory process base on ISO 14064:2018 standard. The subsidiaries and main suppliers were visited by the company during data gathering phase of the new GHG certification. 14064:2018 related energy data gathering process was fulfilled in 2021.

The company attaches importance to the value of acting together against climate risks, which can greatly affect the supply chain. With the software developed to create a systematic approach within the scope of the adaptation of suppliers regarding climate change, it is planned to provide emission information and communication in the most efficient way by 2022.

Impact of engagement, including measures of success

Supplier risk assessment studies have started as of August 2020, and companies have been subject to risk assessments. Within the scope of supplier risks, the targets are:

* High Risk Critical Supplier Ratio: 0% *High Risk Supplier Ratio <1%

At ASELSAN, supply chain risks are determined and followed up by the relevant units in detail, such as global crises, epidemics, natural disasters and terrorist incidents, which are difficult to foresee, as well as those arising from the dynamics of the industry, suppliers, customers or production activities. Risks that are evaluated at a critical level are monitored and measured. Short and medium-term strategies are developed, and necessary practices are implemented to prevent risks or reduce their effects. ASELSAN determines the risks of all its approved suppliers, primarily critical suppliers. After the follow-up visits and the completion of the improvements, the medium risk companies are placed in the low-risk group to be eligible as good performers. The topics of GHG emissions measurement and climate change strategies are added into environmental management questionnaire and our suppliers are monitored and scored according to their replies.

Supplier Scorecard development activities were started in 2019 for the purpose of

measuring the performance of approved sub-industry firms with a scorecard and it took its final form as a result of the improvements in 2021. Scorecards will help ASELSAN to look into the performance of suppliers and determine from which firm it will request a quote. The performance measurements are to be deployed in 2022. The introduction of scorecard practices into procurement processes is intended to prioritize successful firms in requests for proposals and attain a performance based procurement process
Questionnaire:
1. EMS
- Do you have any studies / management system related to EMS and policies and targets within this scope?
- Do you have any products / activities that you think pose a risk for the environment?
- Have you received any environmental law enforcement or criminal action in the last 3 years?
2. GHG Emissions
- Do you have any work to reduce energy consumption? Can you give an example
3.Use of Environmentally Friendly Technology
- Do you take into account the use of clean and environmentally friendly technology in your investments?

Comment

Expectations and demands of ASELSAN's Supply Chain Management from the suppliers:
14064:2018 related energy data gathering process was fulfilled in 2021
•To obtain ISO 14001 certification and / or activate existing environmental management systems, (Ex: Waste management practices, use of reusable equipment, etc.)
• To reduce the consumption of electricity / water / natural gas etc. by starting to record the consumption,
• To use energy-saving and sensor lamps / taps etc.
• To consider Environmentally Friendly Technology in their investment decisions (wetlands and biodiversity)
• To participate the training on Greenhouse Gas Emission monitoring and reduction methods, executed by ASELSAN
• To participate the Carbon Disclosure Project Supplier Module

Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Climate change performance is featured in supplier awards scheme
Offer financial incentives for suppliers who reduce your operational emissions (Scopes 1 &2)
Offer financial incentives for suppliers who reduce your downstream emissions (Scopes 3)

% of suppliers by number

50

% total procurement spend (direct and indirect)

75

% of supplier-related Scope 3 emissions as reported in C6.5

40

Rationale for the coverage of your engagement

All our activities are carried out by focusing on the "sustainability" approach embedded in our strategy and business model. Our suppliers' performance has a significant impact on the management of economic, social and environmental (ESG) issues of our company. We communicated with 50 % of our local companies on climate change issues, get information from them and try to support the improvement of their processes. We will offer financial incentives for suppliers who reduce our operational emissions (Scopes 1 &2) and also financial incentives for suppliers who reduce our upstream emissions (S:3) ENERGY EFFICIENT PURCHASING PROCEDURE was established for procurement activities. With the studies carried out in this context, taking into account energy efficiency at the procurement stage, etc. with process innovations such as integration and minimization of logistics activities, emphasis on environmentally friendly technologies in the selection of machinery / equipment, etc. applications are activated. It is planned to create some indicators in the upcoming period in order to monitor and report the outcomes to be achieved.
In 2022, it is aimed to include more firms in the process and to increase awareness by providing training within the framework of CDP climate change
Additional Info: Within the scope of ISO 50001 Energy Management System, purchasing of materials with certain criteria started to be carried out in accordance with the Energy Efficient Procurement Procedure as of 11.03.2021. Within the scope of energy efficient procurement, the purchases of items with high energy consumption, which are considered as Significant Energy Users (SPEs), are procured in accordance with the Energy Efficient Procurement (EVS) procedure.
With this system;
- Energy Efficient Purchasing option has been added to the Request for Quotation and Purchase Request screens so that the requester can mark and inform the purchasing staff.
- Since the purchasing units are responsible for purchasing the materials specified as Energy Efficient by the requester in this way, warning letters are provided on the purchasing screens so that the demands in the relevant product groups are not overlooked.

Impact of engagement, including measures of success

Supplier risk assessment studies have started as of August 2020, and the companies have been subject to risk assessments. Within the scope of supplier risks, the targets are:
* High Risk Critical Supplier Ratio: 0% *High Risk Supplier Ratio <1%
ASELSAN recognizes the efforts of suppliers who deliver extraordinary contributions to its existing operations, business continuity, and achievements.
The company launched the Supplier Rewarding Program in 2021, presenting excellence awards to suppliers in 4 different categories. These categories are;

1. Supplier Sustainability Award, It covers suppliers who have attained outstanding achievements in environmental/ climate related and social sustainability practices that ASELSAN regards as a top priority.
2. Supplier Process Improvement Award, It covers suppliers who achieve the most value added development through improvement in design, production, quality, etc. processes within the ASELSAN supplier ecosystem.
3. Supplier Quality Performance Award covers suppliers who achieve the lowest rate of quality non-compliance in their deliveries.
4. Supplier Delivery Performance Award covers suppliers who achieve the highest rate of compliance with the delivery dates within the ASELSAN supply ecosystem.

Comment

ASELSAN also provides financial support to its suppliers. Sub-industry companies that have been approved within the scope of this application and whose cooperation has been continuing for a certain period of time, can only get an additional guarantee, guarantor, etc., by contacting the banks within the scope of the relevant system with the orders.
They can have the opportunity to use credit and receive a letter of guarantee without citing a source.
The Company signed contracts with 3 additional banks in 2021, raising the number of partner banks to 15. So far, 111 firms
have used the system, and loans worth USD 173 million were extended, USD 42 million of which was provided in 2021. The system has contributed to the financial sustainability of the firms within ASELSAN's ecosystem.

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Education/information sharing
Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number

60

% of customer - related Scope 3 emissions as reported in C6.5

0

Please explain the rationale for selecting this group of customers and scope of engagement

ASELSAN aims to grow, embrace globalization, create value for its customers, conduct R&D studies, remain competitive and efficient, and improve its human capital and financial structure. In this respect, we have built a Strategic Plan covering a five-year

period. Accordingly, we have developed a compliance monitoring program within the Strategic Management System. We also carry out examinations, analyses and reporting to support our strategic decisions. World's leading defense industry companies, who provide the major portion of the defense needs of their country, lack of customer diversification caused by selling to mainly a single customer. The main client of the Company is the Public Institutions and Organizations, especially the Turkish Armed Forces. This situation is accompanied by the fact that the activities of the Company are generally directed towards the public demands of our country. It is aimed to reduce this risk by working on increasing the sales abroad and carrying the existing know-how to the civilian sectors. Such as: Civilian satellites, surface and underwater technologies, railway signalling and modernization, health systems, naval electron-optical systems, unmanned vehicle systems, advanced material for the energy systems covering electricity generation; transmission, distribution, consumption and management areas. ASELSAN realized 65 % of its total sales to the Turkish Armed Forces, 26% of its sales to private organizations or other corporate customers, and with 9% of its exports. We engage and raise our customers' awareness by information sharing on our products with the activities to offer system solutions, covering R&D, design, production, integration and after-sales support by focusing on Energy Management and Smart Grid Systems and Renewable Energy Systems (solar, wind and hybrid systems). ASELSAN continues to rapidly expand its global effectiveness.
In 2021 the following information covering company's product and services was shared with customers: Smart Cities Monitoring and Management system, Mobil Hybrid Energy Systems, Digitization of cities, Main line signalization system counter traffic jams, waste categorization, battery and electronic equipment disposal.

Impact of engagement, including measures of success

High quality standards and high technological solutions are offered for services or delivered products with regard to customer needs and expectations so as to meet customer satisfaction. Requirements of these quality standards are met and inspections, tests are applied through every process from projects' start till the delivery phases.
Our all processes are administered by directives, quality plans, standards, audits and test instructions. Our processes have been certified by internationally accepted standards such as AS 9100, ISO 9001, ISO 14001, ISO 14064, ISO 45001, AQAP and CMMI so that our products and services are secured to protect quality standards. These certificates are renewed every year with the audits performed. Changes and improvements of international standards are being followed and our processes are developed accordingly. Customer satisfaction, which is the primary objective, is evaluated and reported for the access of related executives. In addition, results and trends are evaluated by the upper management in an annual basis and required recovery activities are planned. In the reporting year; the company measured its customer satisfaction, and operated to ensure full customer satisfaction. Customers are notified of any delays in handling their requests. The company complied with the quality standards with respect to its products and services.
Life cycle Costs of systems and products for transportation, energy, smart systems and healthcare are calculated as part of the design requirement. The results are followed for optimization, and reported to the customer if needed.

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

ASELSAN's vision is to be a reliable, competitively preferred, environment-friendly and human conscious technology firm which preserves its sustainable growth in the global market via the values created for stakeholders, as well as serving its establishment purposes.
Other partners represent: Employees, Ministries, Municipalities and other public Institutions, Sectorial and Non-Governmental Organizations, universities, investors, entrepreneurs, society.
ASELSAN was deemed worthy of "Golden" award in "Best Learning Technology" branch, the Learning Management System, "Bronze" award in "Best Social Learning Usage" branch "Silver" award in "Best Training Team" branch with learning and development projects to promote the co-learning of employees, interns and stakeholders in line with development values. "ASELSAN Talent a" program, one of Türkiye's longest-standing talent programs, received "Silver" award in "Best Evaluation and Resourcing Strategy" branch of "Talent Acquisition" category, and ASELSAN became the first Turkish brand that won an award in this branch.
ASELSAN, aiming to include not only its employees but also the entire value chain in its development journey, produced an informative film for the delegations on occupational safety, environment, and climate change in 2021. The film is screened for every delegation that visits ASELSAN facilities to reflect ASELSAN's perspective on these issues .
In order to achieve the sustainable growth:
* ASELSAN takes an active role in the study that will draw up Türkiye's road map on climate change. As a representative of its field of business, ASELSAN carried out studies in working groups in partnership with the Ministry.
*In 2021, 59 value ambassadors, selected through voluntary participation of employees, took an active role in value promotion activities together with the Internal Communication Department. Ambassadors worked in cooperation with the Human Resources Directorate to carry out a project aiming to develop the Value-Oriented ASELSAN Climate Survey.
* The quality and technological perspectives of the cooperation formed with the universities have been continuing during 2021
*ASELSAN employees are provided with the opportunity to study in the work environment with the initiation of ASELSAN Academy Postgraduate on-line Training Program. The program serves the purpose of internalizing necessary technologies and developing existing technologies as measure of success.
Several universities were brought together through the ASELSAN Academy Model which allows the applicant (the ASELSAN employee), who applies for the graduate program and fulfill the necessary conditions, to take courses and conduct R&D activities about the projects they involve as part of their engineering roles within the company. In the reporting year, ASELSAN continued to grow its R&D activities in the framework of national goals, in areas such as energy, transportation, medical systems, and next generation cellular communication. Continuing cooperation with METU GÜNAM in the field of photovoltaic solar energy, developing new cell cutting techniques for Shingled PV modules and PV module production has been included in the TÜBİTAK project. Production of hybrid energy system solutions that provide reliable, economical and clean energy from sun and wind, continued in the reporting year.

"Aim to reach "Consultant Country" status in the Antarctic Treaty came out. Within the scope of the Antarctic Agreement, the scientific team conducting research in the fields of climate related topics carbon, water and biodiversity in Antarctica, was supported with ASELSAN's communication and energy technologies

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

Yes, climate-related requirements are included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement

Implementation of emissions reduction initiatives

Description of this climate related requirement

Expectations and demands of ASELSAN's Supply Chain Management from the suppliers:
•To obtain ISO 14001 certification and / or activate existing environmental management systems, (Ex: Waste management practices, use of reusable equipment, etc.)
• To reduce the consumption of electricity / water / natural gas etc. by starting to record the consumption,
• To use energy-saving and sensor lamps / taps etc.
• To consider Environmentally Friendly Technology in their investment decisions(including wetlands& biodiversity)
• To participate the training on Greenhouse Gas Emission monitoring and reduction methods, executed by ASELSAN
• To participate the Carbon Disclosure Project Supplier Module

% suppliers by procurement spend that have to comply with this climate-related requirement

50

% suppliers by procurement spend in compliance with this climate-related requirement

70

Mechanisms for monitoring compliance with this climate-related requirement

Certification
Supplier self-assessment
Second-party verification

On-site third-party verification

Response to supplier non-compliance with this climate-related requirement

Retain and engage

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

Yes

Attach commitment or position statement(s)

National Council Call.pdf

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy

Adopting a strategy in harmony with its vision and mission, ASELSAN aims to grow, embrace globalization, create value for its suppliers and customers, conduct R&D studies, remain competitive and efficient, and improve its human capital and financial structure. In this respect, we have built a Strategic Plan covering a five-year period. Accordingly, we have developed a compliance monitoring program within the Strategic Management System. We also carry out examinations, analyses and reporting to support our strategic decisions. ASELSAN continues to be in regular dialogue with lawmakers and regulatory authorities. It participates the meetings of industry groups and trade associations. A transparent management of information sharing and policy dialogue is in place for direct and indirect activities that influence climate policy. In the last quarter of 2020, the Company's Board announced its intention to put an ambitious emissions reduction targets by 2050 and the enthusiasm to achieve them by a Climate Transition Action Plan. The planing and other actions will be discussed and developed during 2021-2022. Low carbon transition studies, new and emerging regulations, renewable energy related activities, supply chain security, Sustainable Development Goals of the UN and Paris Agreement Requirements are assessed under the compliance control mechanism with the coordination of Sustainability Committee. In 2021, the CEO presided the Sustainability Committee. Moreover, our Sustainability Committee together with our Strategic Planning and Corporate Performance Directorate

are responsible of setting and tracking actions to ensure our direct and indirect activities are consistent with our overall climate change strategy.
Climate Change Management Unit carries out the coordination, reporting and monitoring processes of all climate engagement activities across business divisions and external official institutions and organizations.
ASELSAN maintains its communication with its suppliers, which it considers among the most important rings of its value chain, through the Supplier Portal. There is a constant flow of information as communication and meetings, between the groups and the CEO.
ASELSAN has decreased carbon emission significantly .The verification of Energy Management System ISO 50001:2018 in our facilities was realized in May 2021, and ISO 14064:2018 in April 2022.

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Focus of policy, law, or regulation that may impact the climate

Adaptation and/or resilience to climate change
Carbon tax
Circular economy
Climate-related targets
Electricity grid access for renewables
Emissions trading schemes
Energy attribute certificate systems

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Turkish government is working on a long-term climate change strategy and action plan that will help the country meet its targets in line with the Paris Agreement. The government is planning to complete the work on a national statement of contribution and long-term climate change strategy and action plan by the end of 2022. The Turkish President announced the Country's 2053 net-zero emissions and green development targets, the country ratified the agreement and the Paris Agreement entered into force on Nov. 10, 2021. At the council, Türkiye's new road map was determined in seven different areas such as greenhouse gas reduction, green financing, carbon pricing, adaptation to climate change, local governments, migration, just transition and social policies, science and technology.
217 new decisions were taken in line with 2053 net-zero emissions and green development targets within the scope of combating climate change.
The decisions of the council lay the foundation for local governments' climate change practices and responsibilities, urban infrastructure planning, sustainable and resilient urban design, and contribute to the development of support mechanisms.
These decisions will ensure a new, sustainable, fair and equitable transition process, in line with the 2053 net-zero emission target. The workshops that the company has

attended will form the infrastructure of long-term national strategies, actions, policies and legislation in line with Paris Agreement Framework.

Policy, law, or regulation geographic coverage

National

Country/region the policy, law, or regulation applies to

Turkey

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

The company will continue to attend related workshops for the alignment of its strategy with the incoming National Strategy covering ETS regulation and other requirements of Paris Agreement.

The company shares its expertise and perspective to the policy-making process on high priority emerging long-term National Climate Change Strategy, Climate Law and ETS regulation. The sustainability team experts monitor all related regulatory developments, carry out data review and communicate information in the workshops. A cross functional team of environment and energy experts attend these meetings and share their views on the future and development of smart systems that reduce emissions, e-mobility and renewable energy infrastructure developments, especially within the scope of smart cities.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Circular economy

Specify the policy, law, or regulation on which your organization is engaging with policy makers

In order to prevent and minimize waste generation and ensure recycling, ASELSAN started to work voluntarily in May 2019 to implement the "Zero Waste Project" in all its campuses. The training was given to all workers and related staff who will take an active role in waste separation / collection.

Within this implementation approximately 137 tons of waste will be recycled and brought into the economy every year.

In this sense, it was the first defense sector company which started this project in Türkiye. 2 months after the start of the works, the Zero Waste Regulation was issued by the Ministry of Environment and Urbanization of the Republic of Türkiye and it was

made compulsory for companies of the same scale to switch to the Zero Waste system by 2022. However, ASELSAN has quickly completed its work that it has already begun to fully implement the Zero Waste Project in all its campuses. The added value provided by the Zero Waste Project to the environment in 2020 has been analysed.
This project was in progress in 2021.

Policy, law, or regulation geographic coverage

National

Country/region the policy, law, or regulation applies to

Turkey

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

We support the legislation and the communiques related to this legislation with no exceptions. ASELSAN's on-site studies on this area are examples of legal practices.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In mainstream reports

Status

Complete

Attach the document

2021_ASELSAN_Annual_Report.pdf

Page/Section reference

2021_ASELSAN Annual_Report pages:
Governance: 24
Strategy: 47

Enterprise Risk Management: 25

Content elements

Governance
Strategy
Risks & opportunities

Comment

ASELSAN Annual Report 2021 is available on the company's website.
https://www.aselsan.com.tr/2021_ASELSAN_Annual_Report_4746.pdf

Publication

In voluntary sustainability report

Status

Complete

Attach the document

2021 ASELSAN Sustainability Report.pdf

Page/Section reference

2021 ASELSAN Sustainability Report and pages.
Corporate Governance: 28-33
Risk Management: 33-35
Environmental Responsibilities: 55-57
Emissions and Energy: 55-57
Water Management: 91-98-110
Waste Management: 90-110
Green Solutions in Operations: 103

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

ASELSAN Sustainability Report 2021 is available on the company's website
https://www.aselsan.com.tr/ASELSAN_SUSTAINABILITY_REPORT_2021_2264.pdf

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity
Row 1	Yes, both board-level oversight and executive management-level responsibility	In 2021, items related to net zero emissions and sustainability were included in our strategy. Energy management, biodiversity assessment, water/ waste water/ waste management issues are included in the score card. Biodiversity is analyzed under the climate-related topic. Targets are reviewed every 3 months. The board of directors is reviewing this issue, which is included in the climate-related strategic objectives. For the goal to adopt ecologically sound land and water management, the systematic integration of biodiversity assessment in all land and water-related investment pathways will be performed in our organizational activities. The restoration of natural systems and the use of green infrastructure will be prioritized. Innovative organizational arrangements will be performed to overcome cost partitioning. The impact of our investing activities on biodiversity with R&O's will be discussed in sustainability and board committee meetings, and the oversight on the R&O's assessments will be performed. Within the scope of the Antarctic Agreement, the scientific team conducting research in the fields of climate, water and biodiversity in Antarctica, was supported with ASELSAN's technologies. After the Board level decision made in 2021 the following task was completed: Within the scope of the "National Support to the National Expedition". Sixth National Antarctic Science Expedition carried out by TÜBİTAK MAM Polar Research Institute, the HBT Sector Presidency radio and modular repeater radio, one of our products developed with domestic and national resources, completed the relevant task. Our radios will add a new one to their success in many challenging environments around the world, and will be the life partner of our teams in the harsh environment of the polar regions. The Portable Hybrid Power Support Unit, which

		produces energy with high-efficiency solar panels for the uninterrupted operation of the systems and can be installed by two people, will provide energy support to the scientists in Antarctica, where there is no electricity infrastructure. Turkish researchers who reached the continent at the end of January returned to our country at the beginning of March. We were honored to take part in this successful study with the radios and equipment used in this journey of discovery, where biodiversity and climate related other issues are explored and new discoveries are expected.

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Commitment to respect legally designated protected areas Commitment to avoidance of negative impacts on threatened and protected species Commitment to no conversion of High Conservation Value areas	Other, please specify Within the scope of the Antarctic Agreement, the scientific team conducting research in the fields of climate, water and biodiversity in Antarctica, was supported with ASELSAN's technologies.

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?
Row 1	Yes, we assess impacts on biodiversity in both our upstream and downstream value chain

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Education & awareness Law & policy

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No, we do not use indicators, but plan to within the next two years	Other, please specify we plan to do within the next two years.

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Governance	Sustainability Report pages: 14,35,59 [1]
Other, please specify Training to suppliers	Other, please specify Training and videos	Training to suppliers

[1] 2021 ASELSAN Sustainability Report.pdf

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Corporate Management Vice President	Board/Executive board

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms