

CRITERIA FOR THE ENVIRONMENTAL LABELING OF NATURAL STONE PRODUCTS

GENERAL FRAMEWORK

ARTICLE 1- These criteria have been established under the Environmental Label Regulation dated 19.10.2018 and numbered 30570.

ARTICLE 2- The “Natural Stone” product group consists of intermediate quarry products (large block or slab of dimension stone or slate) directly produced in the natural stone quarry and final natural stone products (plate, modular tiles, mosaics, etc.) produced in the transformation plant.

ARTICLE 3- In order for the products in the “natural stone” product group to be awarded the Environmental Label within the scope of the Environmental Label Regulation, the criteria specified in this document must be fulfilled.

ARTICLE 4- The Environmental Label criteria and assessment and verification requirements established for the product group “natural stone” will be valid for 5 (five) years. The criteria may be updated within a five-year period when deemed necessary by the Environmental Labeling Board. The period of validity of the criteria may be extended based on the approval of the Environmental Labeling Board.

Assessment and Verification Requirements

The specific assessment and verification requirements are indicated within each criterion.

When a statement, document, analysis, test report or other evidence is requested from the applicant to prove its compliance with the criteria, these documents requested in accordance with the current situation can be issued by the applicant and/or its supplier/suppliers and/or their supplier/suppliers. In accordance with the current situation, a method different from the test methods determined for each criterion can be used, provided that the equivalence is accepted by the Ministry evaluating the application.

The Ministry recognizes the tests performed by laboratories accredited by an accreditation body that is a party to the International Laboratory Accreditation Association (ILAC) - Mutual Recognition Agreement (MRA) according to TS EN ISO/IEC 17025. TÜRKAK accredited organizations can be accessed at <https://secure.turkak.org.tr/kapsam/search> TS EN ISO/IEC 17025 accreditation condition is not required if it is documented that there is no accredited organization for the test method, which is mandatory within the scope of evaluation and verification requirements.

When generating data on the classification of substances or mixtures, the provisions of the "Regulation on the Test Methods to be Applied in the Determination of the Physico-Chemical, Toxicological and Ecotoxicological Properties of Substances and Mixtures" published in the second repeated Official Gazette dated 11.12.2013 and numbered 28848 or methods that have

been validated in accordance with internationally recognized scientific principles or international procedures should be considered.

The applicant must have fulfilled the necessary obligations under the Environmental Law and the current legislation that came into force pursuant to this law. Accordingly, the applicant is obliged to submit other documents required by the Ministry, such as the EIA Decision, Environmental Permit and License Certificate, Zero Waste Certificate, etc.

Where appropriate, the Ministry may require supporting information/documentation and may carry out independent verification.

CRITERIA

Table 1 lists the criteria that must be met at the natural stone quarry and raw material transformation plant providing raw materials:

Table 1. Overview of the Criteria According to the Specific Product

1. CRITERIA FOR ALL PRODUCTS	
1.1. Industrial and Construction Mineral Extraction	
1.2. Restricted Substances	
1.3. VOC Emissions	
1.4. Fitness for Use	
1.5. Consumer Information	
1.6. Information Appearing on the Environmental Label	
1.7. Environmental Management System (Optional)	
PRODUCT SPECIFIC CRITERIA	
2. Intermediate Products (large block, slab or slate)	3. Processed Products (slab, modular tiles, mosaics, etc.)
2.1 Energy Consumption at the Natural Stone Quarry	3.1. Energy Consumption at the Transformation Plant
2.2. Material Efficiency at the Natural Stone Quarrying	3.2. Water and Wastewater Management at the Transformation Plant
2.3. Water and Wastewater Management at the Natural Stone Quarry	3.3. Dust Control at the Transformation Plant
2.4. Dust Control at the Natural Stone Quarry	3.4. Reuse of Process Waste from the Transformation Plant
2.5. Personnel Safety and Working Conditions at the Natural Stone Quarry	3.5. Regional Integrated Production at the Transformation Plant (Optional)
2.6 Landscape Impact Ratios at the Natural Stone Quarry (Optional)	

CRITERION 1. CRITERIA FOR ALL PRODUCTS

Criterion 1.1 Industrial and Construction Mineral Extraction

The raw materials used in the production of natural stone products shall comply with the requirements in Table 2 for the related extraction activities:

Table 2. Documents Required for Raw Materials Extraction Activities

Requirements
1. "EIA Positive" Decision, "EIA Not Required" Decision or EIA Opinion
2. Topographic Map and Satellite Image Showing the Location of the Raw Material Field (Natural Stone Quarry)
3. Business License to Open and Operate
4. Operating License
5. Reinstatement Plan

Assessment and verification: The applicant shall provide related data and documents, including a map of the area. If the extraction activity is not directly managed by the producer, the documentation shall be requested from the enterprise from which the raw material is procured by the extractor(s).

A "Reinstatement Plan" shall be provided within the scope of the " Reinstatement of Land Degraded by Mining Activities", which was published in the Official Gazette dated 23.01.2010 and numbered 27471.

Criterion 1.2. Restricted Substances

Criterion 1.2 (a) Substances of Very High Concern (SVHCs)

All ingoing chemicals used in the production of natural stone and any supplied materials that form part of the final product shall not contain substances of very high concern defined in Article 49 of the "Regulation on the Registration, Evaluation, Authorization and Restriction of Chemicals", which entered into force after being published in the Official Gazette dated 23.06.2017 and numbered 30105, in concentrations greater than 0.10 % (weight by weight).

Assessment and verification: The applicant must declare that all supplied chemicals and materials used in the manufacture of natural stone products do not contain more than 0.1% by weight of substances of very high concern. The declaration in this direction shall be supported by the safety data sheets (SDS) of chemicals and materials or appropriate documents obtained from their suppliers.

The substances of very high concern are defined within the scope of the Regulation on Registration, Evaluation, Authorization and Restriction of Chemicals, and the List of Candidate Substances Subject to Authorization published under Article 49 of the same regulation can be accessed at <https://cygm.csb.gov.tr/>.

Reference to the list shall be made on the submission date of the environmental label application.

Criterion 1.2 (b). Restrictions on Classified Substances under the Regulation on Classification, Labeling and Packaging of Substances and Mixtures (SEA Regulation)

Unless derogated in Table 3, the product shall not contain substances or mixtures in concentrations greater than 0.10 % (weight by weight) that are assigned any of the following hazard classes:

- H300 (Lethal if swallowed.)
- H301 (Toxic if swallowed.)
- H311 (Toxic in contact with skin.)
- H331 (Toxic by inhalation.)
- H304 (May be fatal if swallowed and enters the respiratory tract.)
- H310 (Lethal in contact with skin.)
- H330 (Lethal if inhaled.)
- H340 (May cause genetic damage.)
- H341 (Suspected of causing genetic defects.)
- H350 (Can cause cancer.)
- H351 (Suspected of causing cancer.)
- H350i (May cause cancer by inhalation.)
- H360 (May damage fertility or the unborn child.)
- H360F (May damage fertility)
- H360D (May cause damage to the unborn child.)
- H360FD (May damage fertility. May damage the unborn child.)
- H360Fd (May damage fertility. Suspected of damaging the unborn child.)
- H360Df (May cause damage to the unborn child. Suspected of damaging fertility.)
- H361 (Suspected of damaging fertility or the unborn child.)
- H361f (Suspected of damaging fertility.)
- H361d (Suspected of damaging the unborn child)
- H361fd (Suspected of damaging fertility. Suspected of damaging the unborn child.)
- H362 (May cause harm to a breastfed child.)
- H370 (Causes damage to organs.)
- H371 (May cause damage to organs.)
- H372 (Causes damage to organs through prolonged or repeated exposure.)
- H373 (May cause damage to organs through prolonged or repeated exposure.)
- H400 (Very toxic to aquatic life)
- H410 (Very toxic to aquatic life with long lasting effects)
- H411 (Toxic to aquatic life with long lasting effects)
- H412 (Harmful to aquatic life with long lasting effects)
- H413 (May cause long lasting harmful effects in the aquatic environment)

The use of substances or mixtures that are chemically modified during the production process, so that the above-mentioned hazard statements are no longer valid, shall be exempted from the above requirement.

Table 3: Derogations to restrictions on substances classified under the sea regulation and applicable conditions

Substance/mixture type	Applicability	Derogated hazard class	Derogation conditions
Titanium dioxide (TiO ₂)	All materials within the scope	H351	TiO ₂ is not intentionally added to the product but is present because it is a naturally occurring impurity in the raw materials used. TiO ₂ content in any raw material used to manufacture the final product is less or equal to 2% (w/w).
Crystalline silica	All materials within the scope	H372, H373	The applicant provides a declaration of compliance with any relevant instructions for safe handling and dosing specified in the safety data sheet or supplier declaration. Factory cutting operations are carried out using wet process tools or dry processes where a vacuum hood is in place to collect dust. Safety instructions regarding exposure to dust during any cutting operations carried out by installers are provided with the product.

Assessment and verification: The applicant shall provide a list of all relevant chemicals used in the production processes together with the relevant SDS or chemical supplier declaration.

Any chemicals containing substances or mixtures with the hazard statements specified in the criterion shall be highlighted. The approximate dosage rate of the chemical, together with the concentration of the restricted substance or mixture in that chemical (as provided in the SDS or supplier declaration) and an assumed retention factor of 100 %, shall be used to estimate the quantity of the restricted substance or mixture remaining in the final product.

Since multiple products or potential products using the same process chemicals may be covered by a single license, the calculation for each chemical only needs to be presented for the worst-case product (e.g., the most heavily surface-treated or pigmented or printed) covered by the Turkish Environmental Label.

Justifications for any deviation from a 100% retention factor or for chemical modification of a restricted hazardous substance or mixture must be provided in writing.

For any restricted substance or mixture that exceeds 0.1% by weight of the final natural stone product, a relevant derogation must be in place and proof of compliance with any relevant derogation conditions must be provided.

Criterion 1.3. VOC Emissions

No surface treatments using formaldehyde-based resins shall be permitted.

Any natural stone products that have been surface treated with VOC-containing compounds shall be tested for VOC emissions and shall comply with the limits defined in Table 4.

Table 4: VOC Emissions Test Method and Limit Values

	Limits (28 days later)	Method
Total VOC	300 µg/m ³	TS EN 16516+A1
Formaldehyde	10 µg/m ³	
R-Value	<1	
Carcinogenic 1A and 1B VOCs listed in TS EN 16516+A1 Annex H (Excluding Formaldehyde and Acetaldehyde)	For each single item 1 µg/m ³	

Assessment and Verification: The applicant shall declare if the surface of the final product has been treated with any waxes, adhesives, coatings, resins or similar surface treatment chemicals and shall provide the relevant SDS or supplier declarations about the VOC content of the surface treatment chemicals used.

In cases where VOC emission testing is required, the applicant shall provide a declaration of compliance, supported by a test report carried out according to TS EN 16516+A1. If compliance with the chamber concentration limits specified at 28 days can be met at any other time between 3 and 28 days, the chamber test may be stopped prematurely.

Criterion 1.4. Fitness for Use

This criterion does not apply to intermediate products (i.e. dimension stone blocks).

The applicant shall have a quality control and quality assessment procedure in place to ensure that the products are fit for use.

Assessment and verification: The applicant shall provide a declaration of compliance with this criterion supported by the following documents:

- Certification of the production site according to ISO 9001 or a copy of the in-house quality management system and related quality assurance and quality control procedures.
- A detailed description of the procedure for handling consumer complaints.

Where relevant, additional evidence demonstrating fitness for use shall be provided. The fitness for use of the natural stone product depending on the usage type, according to the relevant TSE, ISO, CEN or equivalent standard (TS EN 1341, TS EN 1342, TS EN 1343, TS EN 1467, TS EN 1468, TS EN 1469, TS EN 12057, TS EN 12058 or TS EN 12059) and the declared performance values for the intended use shall meet the national requirements.

The details of the test procedures and results shall be provided together with a declaration that the product is fit for use based on all the other information about the best application by the end-user. According to the Construction Materials Regulation (305/2011/AB), a product is presumed to be fit for use if it conforms to the relevant harmonized standard or a European Technical Assessment, the declared performance values for its intended use also meet national requirements and do not contradict the legislation. The conformity mark 'CE' for construction materials provides producers with an attestation of conformity easily recognizable and may be considered sufficient in this context.

Criterion 1.5. User Information

This criterion does not apply to intermediate products (i.e. dimension stone blocks).

The product shall be sold with relevant user information, which provides advice on the product's proper and best general and technical use as well as its maintenance.

It shall bear the following information on the packaging and/or on the documentation accompanying the product:

- a) Information for the use and maintenance of the product

This information shall highlight all relevant instructions, particularly referring to the maintenance and use of products. As appropriate, reference should be made to the features of the product's use under difficult climatic or other conditions, for example, frost resistance/water absorption, stain resistance, resistance to chemicals, necessary preparation of the underlying surface, cleaning instructions and recommended types of cleaning agents and cleaning intervals. The information should also include any possible indication of the product's potential life expectancy in technical terms, either as an average or as a range value.

- b) Recycling or disposal *information*

Information on the correct recycling or environmentally preferable disposal of packaging provided with the hard covering product, off-cuts of the hard covering product created during installation and the product itself at the end of life.

Assessment and verification: The applicant shall provide a sample of the packaging and/or a high-resolution image of the packaging and a link to the online version of the user information.

Criterion 1.6. Information Appearing on the Environmental Label

An Environmental Label with dimensions of 5x5 cm shall be placed on the product packaging. The environmental label shall contain the following information:

- The document number in the 10-point font at the bottom of the label.
- The statement of "The use of Environmental Label in this product has been approved by the Ministry of Environment, Urbanization and Climate Change in accordance with the Environmental Label Regulation published in the Official Gazette dated 19.10.2018 and numbered 30570 due to its environmental performance.",

If approved in the application process for the product, the following statements may also be included:

- “Material efficient production process.”,
- “Reduced dust emissions.”,
- “Production with closed-loop wastewater recycling.”.

Assessment and verification: The applicant shall provide a copy of the product label of the packaging on which the Environmental Label is placed, together with a signed declaration of compliance. The Environmental Label shall be placed on the packaging of products of different sizes, in the dimensions determined by T.C. Ministry of Environment, Urbanization and Climate Change. For the use of labels in different sizes, the approval of the Ministry is required.

Criterion 1.7. Environmental Management System (Optional)

This criterion applies to the production site of the applicant where the licensed Turkish Environmental Label product is produced.

5 points shall be awarded for applicants that have a documented environmental management system in place according to TS EN ISO 14001 and certified by an accredited organization.

Assessment and verification: The applicant shall provide a copy of the valid TS EN ISO 14001 certificate issued by an accredited organization.

PRODUCT SPECIFIC CRITERIA

SCORING SYSTEM

The Turkish Environmental Label may be awarded both to intermediate quarry natural stone products (large blocks or slabs) produced directly by natural stone quarry operators and to final natural stone products produced by transformation plants.

In cases where the applicant is not a natural stone quarry operator and the natural stone quarry operator is not within the scope of the Turkish Environmental Label, the applicant shall declare natural stone quarry from which the material used to produce the Turkish Environmentally Labeled natural stone product was sourced, supported by delivery invoices dating no more than 1 year prior to the application date.

In this case, the applicant shall provide all relevant statements from the natural stone quarry operator demonstrating compliance with all natural stone quarry-related Turkish Environmental Labeling System requirements and any other relevant optional requirements that may result in points being granted.

The scoring system to be applied for natural stone products, the points to be applied and the required minimum points are presented in Table 5 below.

Table 5: Natural Stone Products Scoring System

Criteria where points can be awarded	Intermediate blocks or slabs of dimension stone	Final transformed natural stone hard covering products
2.1. Energy consumption at the natural stone quarry	Up to 20 points	Up to 20 points
2.2. Material efficiency at the natural stone quarry	Up to 25 points	Up to 25 points
2.6. Landscape impact ratios at the natural stone quarry (optional)	Up to 10 points	Up to 10 points
3.1. Energy consumption at the transformation plant	n/a	Up to 20 points
3.2. Water and wastewater management at the transformation plant	n/a	Up to 5 points
3.4. Reuse of process waste from the transformation plant	n/a	Up to 10 points
3.5. Regionally integrated production at the transformation plant (optional)	n/a	Up to 5 points
1.7. Environmental Management System of the quarry (optional)	0 or 5 points	n/a
1.7. Environmental Management System of the transformation plant (optional)	n/a	0 or 5 points
Total maximum points	60	100
Minimum points required for Environmental label	30	50

CRITERION 2. CRITERIA FOR INTERMEDIATE PRODUCTS

Criterion 2.1. Energy Consumption at the Natural Stone Quarry

The quarry operator shall have established a program to systematically monitor, record and reduce specific energy consumption and specific CO₂ emissions to optimal levels. The applicant shall report energy consumption as a function of energy source (e.g. electricity and diesel) and purpose (e.g. use of onsite buildings, lighting, cutting equipment operation, pumps and vehicle operation). The applicant shall report on energy consumption for the site both on an absolute basis (in units of kWh or MJ) and on a specific production basis (in units of kWh or MJ per m³ of quarried material and per m³ or t of the material sold/produced and ready for sale) for a given calendar year. A plan to reduce specific energy consumption and CO₂ emissions shall describe measures already taken or planned to be taken (e.g. more efficient use of existing equipment, investment in more efficient equipment, improved transportation and logistics, etc.).

In addition, a total of 20 points may be granted as follows:

- Up to 10 points shall be awarded in proportion to how much of the energy consumed (fuel plus electricity) is from renewable sources (from 0 points for 0 % renewable energy up to 10 points for 100 % renewable energy).
- Up to 5 points shall be awarded depending on the manner in which any renewable electricity is purchased as follows: via private energy service agreements for on-site or near-site renewables (5 points); corporate power purchase agreements for on-site or near-site renewables (5 points); long term corporate power purchase agreements for grid-connected or remote grid renewables (4 points); green electricity certifications (3 points); purchase of renewable energy guarantees of origin certificates for the full electricity supply or green tariff from utility supplier (2 points).
- 3 points shall be awarded where a carbon footprint analysis has been carried out for the product in accordance with TS EN ISO 14067 or 5 points if the Product Environmental Footprint method's elements related to greenhouse gas emissions have been used.

Assessment and verification: The applicant shall provide an energy inventory for the natural stone quarry for a period of at least 12 months prior to the date of award of the Turkish Environmental Label license and shall commit to maintaining such an inventory during the validity period of the Turkish Environmental Label license. The energy inventory shall distinguish the different types of fuel consumed, highlighting any renewable fuels or renewable content of mixed fuels. As a minimum, the specific-energy consumption and specific CO₂ emission reduction plan must define the baseline situation with energy consumption at the quarry when the plan was established, identify and clearly quantify the different sources of energy consumption at the quarry, identify and justify actions to reduce energy consumption and to report results on a yearly basis.

The applicant shall provide details of the electricity purchasing agreement in place and highlight the share of renewables that applies to the electricity being purchased. If necessary, a declaration from the electricity provider shall clarify (i) the share of renewables in the electricity supplied, (ii) the nature of the purchasing agreement in place (i.e. private energy service agreement, corporate power purchase agreement, independent green energy certified or green tariff) and (iii) whether the purchased electricity is from on-site or near-site renewables.

In cases where the guarantee of origin certificates are purchased by the applicant to increase the renewables share, the applicant shall provide appropriate documentation to ensure that the guarantee of origin certificates have been purchased in accordance with the principles and rules of the International Renewable Energy Certificate (I-REC) or the Renewable Energy Source Guarantee Certificate in the Electricity Market (YEK-G). provides the appropriate documentation to become.

In cases where points are claimed for a carbon footprint analysis, the applicant shall provide a copy of the analysis, which shall be in accordance with TS EN ISO 14067 or the Product Environmental Footprint method and have been verified by an accredited third party. The footprint analysis must cover all manufacturing processes directly related to stone production at the quarry, onsite and offsite transportation during production, emissions relating to administrative processes (e.g. operation of onsite buildings) and transport of the sold product to

the quarry gate or local transportation hub (e.g. train station or port).

Criterion 2.2. Material Efficiency at the Natural Stone Quarry

The natural stone quarry operator shall provide the following data on mining and commercial activities at the natural stone quarry for the most recent calendar year or 12-month rolling period prior to the date of issue of the Turkish Environmental Label:

- **A:** Total quantity of material extracted from the natural stone quarry (m³)
- **B:** The quantity of saleable blocks produced from A (m³).
- **C:** Total quantity of extractive waste and materials qualify as by-products that are sold (m³)
- **D:** Total quantity of extractive waste and materials that is used internally (m³).
- **E:** Total quantity of extractive waste that are transferred to the extractive waste deposition area at the natural stone quarry or landfill (m³).

In cases where data is available in tonnes, it should be converted to m³ using a fixed bulk density factor for the rock material being extracted.

The mineral extraction efficiency ratio shall be at least 0.20 and shall be calculated as follows:

$$\text{Mineral extraction efficiency ratio} = \frac{(B + C)}{A}$$

In addition, up to 25 points will be awarded in proportion to the mineral extraction efficiency up to the applicant's environmental excellence threshold of 1.00. (from 0 points for an extraction efficiency ratio of 0.20 to 25 points for an extraction efficiency ratio of 1.00).

Assessment and verification: A declaration from the quarry operator shall be provided that states the values of A, B, C, D and E, expressed in m³ and the calculation of the extraction efficiency ratio.

For calculation purposes, it should be assumed that A-B = C+D+E. For any material calculated under C that was sold, invoices of the material delivery to the other sites shall be provided.

Criterion 2.3. Water and Wastewater Management at the Natural Stone Quarry

The applicant shall provide a description of water use in quarrying operations including strategies and methods for the collection, recirculation and reuse of water.

In general:

- The site shall make provisions for the opportune collection of stormwater run-off to compensate for water lost in wet sludge and evaporation.
- The site shall make provisions for the diversion of stormwater run-off via a drainage network to prevent the surface flow of rainwater across the working area from carrying suspended solid loads into any impermeable ponds (that supply water to the cutting equipment) or into natural watercourses.

Where wet cutting techniques are used:

- Water for use by wet cutting equipment shall be stored in an impermeable container

(for example a tank, lined pond or an excavated pond set in impermeable rock).

- The separation of solids from cutting wastewater shall be achieved by sedimentation systems, retention basins, cyclone separators, inclined plate clarifiers, filter presses or any combination thereof. Clarified water shall be returned to the impermeable pond or container which supplies the cutting equipment.
- Settled sludge shall be dewatered prior to internal use for useful purposes, external use for useful purposes or transport offsite to a suitable waste disposal facility.

Assessment and verification: The natural stone quarry operator shall provide a declaration of compliance with this criterion, supported by relevant documentation describing how water is used onsite and providing details of the water management system, sludge separation and sludge disposal operations and destinations.

Criterion 2.4. Dust Control at the Natural Stone Quarry

The applicant shall demonstrate that operational site measures that have been implemented for dust control at the quarry site. Measures may vary from site to site but should include the following aspects for all sites:

- Use of dust suppression water sprays or vacuum hoods linked to dust filter bags/electrostatic precipitators for any dry cutting, crushing or other activities that are likely to generate significant quantities of dust.
- A plan in place for the relocation, modification or stoppage of operations on site in order to prevent or minimize dust emissions into the air during periods of adverse weather (not applicable to underground quarries).
- Inclusion of wind protection features in the quarry design that aim to reduce wind speed and thus minimize dust emissions and soil erosion onsite (e.g. wind fences or windbreaks consisting of one or more rows of plants along the border of the extractive waste deposition area, including the extractive waste facility and/or extractive waste handling area)
- Provision of an enclosed storage area for all dewatered sludge from wet cutting and/or all dust from dry cutting operations prior to sale, prior to shipment to a landfill or reuse onsite.
- Covering of the most heavily used road surfaces with concrete or asphalt paving.
- Provision of appropriate training to employees about good practice for dust control and the provision of adequate personal protective equipment to employees and visitors.
- Provision of routine medical check-ups for employees with the possibility for more frequent monitoring for the identification of respiratory problems and the possible onset of silicosis (the latter point being applicable only to granite and other siliceous rock quarries).

Assessment and verification: The natural stone quarry operator shall provide a declaration of compliance with this criterion, supported by relevant documentation and (i) a description of the dust control measures implemented at the quarry site and (ii) details of the medical check-up

system for employees, as appropriate.

Criterion 2.5. Personnel Safety and Working Conditions at the Natural Stone Quarry

The applicant shall provide a description of the occupational health and safety policy in force at the quarry. The policy shall cover, as a minimum, the following:

- A systematic analysis of all risks and major hazards that may occur in the quarry.
- A training plan for employees that is related to specific work procedures that are carried out at the quarry.
- An inspection and maintenance plan for all machinery, tools, electrical installations, vehicles, ladders, walkways, staircases, safety barriers and other relevant equipment.
- Placement of fixed guards around moving parts of machinery such as belts, pulleys, gears and adjustable guards for circular saws.
- Quick-release controls to shut off power to handheld electric power tools and emergency stop buttons on control panels for all heavy machinery.
- Safe storage of any explosives onsite.
- Appropriate transportation and lifting gear for the movement and positioning of dimension stone blocks and large fragments of blocks.
- Emergency plans and first-aid training for personnel.
- Personal Protective Equipment provision for all personnel and site visitors
- Clear identification of areas with risks of high noise levels.
- The following aspects of working conditions must be provided:
 - Access to toilet, changing room and lunchroom facilities for workers and the provision of drinking water at all times.
 - Compliance with national laws and regulations or with the fundamental conventions of the International Labour Organisation (ILO), whichever is the more stringent;
 - Labour contracts for all employees that clearly describe the relevant work, maximum obligatory hours of work, salary, social insurance contributions (or other suitable insurance against accidents in countries where social insurance does not exist), holiday entitlements and notice period.
- Full compliance with the Occupational Health and Safety Law No. 6331.

Assessment and verification: The applicant shall provide a declaration of compliance with this criterion, supported by a copy of the occupational health and safety policy.

In cases where compliance with ILO conventions is provided, the applicant shall obtain third-party verification, supported by site audits, that the natural stone quarry has complied with the applicable principles of the fundamental ILO conventions described below:

Fundamental conventions of the ILO:

- a) Child Labor:

- Minimum Age Convention, 1973 (No 138)
- Worst Forms of Child Labor Convention, 1999 (No 182)
- b) Forced and Compulsory Labor:
 - Forced Labor Convention, 1930 (No 29) and Additional Protocol 2014 to the Forced Labor Convention
 - Abolition of Forced Labour Convention, 1957 (No. 105)
- c) Freedom of Association and Right to Collective Bargaining:
 - Freedom of Association and Protection of the Right to Organize Convention, 1948 (No 87)
 - Right to Organize and Collective Bargaining Convention, 1949 (No 98)
- d) Discrimination
 - Equal Remuneration Convention, 1951 (No 100)
 - Discrimination (Employment and Occupation) Convention (No 111).

Criterion 2.6. Landscape Impact Ratios at the Natural Stone Quarry (Optional)

The natural stone quarry operator shall provide the following data relating to the quarry site in order to permit the calculation of the quarry footprint ratio or the quarry beneficial land use ratio (Table 6), based on a satellite view of the site no more than 1 year prior to the date of award of the Environmental Label.

- **QF:** Quarry Front (active) area (m²)
- **EWDA:** Extractive Waste Deposition Area (m²)
- **BPDA:** By-Products Deposition Area (m²)
- **TAA:** Total Authorised Area for the site where the extraction activity takes place (m²).
- **BA:** Biodiverse Area, where (i) topsoil and vegetation cover or wetlands/engineered reed-beds have been established using native species as part of progressive rehabilitation and/or (ii) where topsoil and vegetation have simply not been disturbed in the first place and is not isolated in pockets within the natural stone quarry (m²)
- **REA:** Renewable Energy Area, where land has been occupied for the generation of electricity via solar, hydroelectric, wind or biomass energy (m²).

Table 6: Landscape Impact Ratios Scoring System in Natural Stone Quarry

	Quarry Footprint Ratio	Beneficial Land Use Ratio
Calculation	$\frac{QF + EWDA + BPDA}{TAA}$	$\frac{BA + REA}{TAA}$
Threshold for 0 points	0.70	0.00
Threshold for 5 points	0.20	0.40

Up to a total of 10 points shall be awarded (5 for each ratio) in proportion to how much the applicant demonstrates that ratios approach or exceed the relevant thresholds for 5 points.

Assessment and verification: A declaration from the natural stone quarry operator shall be provided, together with documentation including maps or satellite images in which the QF, EDWA, BPDA, TAA, BA and REA are outlined, and with estimations of the surface of each area.

CRITERION 2. CRITERIA FOR TRANSFORMED PRODUCTS

Criterion 3.1. Energy Consumption at the Transformation Plant

The applicant shall have established a program to systematically monitor, record and reduce specific energy consumption and specific CO₂ emissions in the transformation plant to optimal levels. The applicant shall report energy consumption as a function of energy source (e.g. electricity and diesel) and purpose (e.g. use of onsite buildings, lighting, cutting equipment operation, pumps and vehicle operation). The applicant shall report on energy consumption for the site both on an absolute basis (in units of kWh or MJ) and on a specific production basis (in units of kWh or MJ per m³, m² or t of the material sold/produced and ready for sale) for a given calendar year.

A plan to reduce specific energy consumption and specific CO₂ emissions shall describe measures already taken or planned to be taken (e.g. more efficient use of existing equipment, investment in more efficient equipment, improved transportation and logistics, etc.).

In addition, a total of 20 points may be granted as follows:

- Up to 10 points shall be awarded in proportion to how much of the energy consumed (fuel plus electricity) is from renewable sources (from 0 points for 0 % renewable energy, up to 10 points for 100 % renewable energy).
- Up to 5 points shall be awarded depending on the manner in which any renewable electricity is purchased as follows: via private energy service agreements for on-site or near-site renewables (5 points); corporate power purchase agreements for on-site or near-site renewables (5 points); long term corporate power purchase agreements for grid-connected or remote grid renewables (4 points); green electricity certificates (3 points); purchase of renewable energy guarantees of origin certificates for the full electricity supply or green tariff from utility supplier (2 points).
- 3 points shall be awarded where a carbon footprint analysis has been carried out for the product in accordance with TS EN ISO 14067 or 5 points if the Product Environmental Footprint method's elements related to greenhouse gas emissions have been used.

Assessment and verification: The applicant shall provide an energy inventory for the transformation plant for a period of at least 12 months prior to the date of award of the Turkish Environmental Label license and shall commit to maintaining such an inventory during the validity period of the Turkish Environmental Label license. The energy inventory shall distinguish the different types of fuel consumed, highlighting any renewable fuels or renewable content of mixed fuels. As a minimum, the specific-energy consumption and CO₂ emission

reduction plan must define the baseline situation with specific energy consumption at the transformation plant when the plan was established, identify and clearly quantify the different sources of energy consumption at the transformation plant, identify and justify actions to reduce specific energy consumption and to report results on a yearly basis.

The applicant shall provide details of the electricity purchasing agreement in place and highlight the share of renewables that applies to the electricity being purchased. If necessary, a declaration from the electricity provider shall clarify

- the share of renewables in the electricity supplied,
- the nature of the purchasing agreement in place (i.e. private energy service agreement, corporate power purchase agreement, independent green energy certified or green tariff) and
- whether the purchased electricity is from on-site or near-site renewables.

In cases where the guarantee of origin certificates are purchased by the applicant to increase the renewables share, the applicant shall provide appropriate documentation to ensure that the guarantee of origin certificates have been purchased in accordance with the principles and rules of the International Renewable Energy Certificate (I-REC) or the Renewable Energy Source Guarantee Certificate in the Electricity Market (YEK-G)¹ must provide appropriate documentation.

In cases where points are claimed for a carbon footprint analysis, the applicant shall provide a copy of the analysis, which shall be in accordance with ISO 14067 or the Product Environmental Footprint method and have been verified by an accredited third party. The footprint analysis must cover all manufacturing processes directly related to stone production at the quarry and the transformation plant, onsite and offsite transportation during production, emissions relating to administrative processes (e.g. operation of onsite buildings) and transport of the sold product to the transformation plant gate or local transportation hub (e. g. train station or port).

Criterion 3.2. Water And Wastewater Management at the Transformation Plant

The applicant shall provide a description of water use in the natural stone transformation plant, including strategies and methods for the collection, recirculation, and reuse of water.

The recovery of solids from wastewater from cutting operations must be carried out on site using sedimentation and/or filtration principles.

Clarified wastewater must be stored onsite and recirculated for cutting operations, dust control or other purposes.

In addition, 5 points shall be awarded for the installation of a rainwater collection system to collect and store rainwater that lands on impermeable areas onsite and prevents the surface flow

¹ Renewable Energy Resource Guarantee Certificate Regulation in the Electricity Market published by the Energy Market Regulatory Authority in the Official Gazette dated 14 November 2020 and numbered 31304

of rainwater across working areas and carrying suspended solid loads into any impermeable ponds (that supply water to the cutting equipment) or into natural watercourses.

Assessment and verification: The applicant shall provide a declaration of compliance with this criterion, supported by the relevant documentation describing water use onsite, of the wastewater/rainwater collection network and of the wastewater treatment and recirculation system.

Criterion 3.3. Dust Control at the Transformation Plant

The applicant shall demonstrate that operational site measures have been implemented for dust control at the transformation plant. Measures may vary from site to site but should include the following aspects for all sites:

- Use of dust suppression water sprays or vacuum hoods linked to dust filter bags/electrostatic precipitators for any dry cutting or shaping activities that are likely to generate significant quantities of dust.
- Regular cleaning of dust from indoor floor areas using either water sprays on surfaces that drain to a water treatment system on site or the use of a vacuum device for dry dust removal (sweeping of dry dust should not be carried out)
- Provision of an enclosed storage area for all dewatered sludge from wet cutting and/or all dust from dry cutting operations prior to sale, prior to shipment for reuse, prior to reuse onsite or prior to shipment to landfill.
- Covering the most heavily used road areas with concrete or asphalt paving.
- Provision of appropriate training to employees about good practice for dust control and provision of adequate personal protective equipment to employees and visitors.
- Provision of routine medical check-ups for employees, with the possibility for more frequent monitoring for the identification of respiratory problems and the possible onset of silicosis (the latter point being applicable only to transformation plants processing granite and other siliceous rock).

Assessment and verification: The applicant shall provide a declaration of compliance with this criterion, supported by relevant documentation and: (i) a description of the dust control measures implemented at the transformation plant and (ii) details of the medical check-up system for employees, as appropriate.

Criterion 3.4. Reuse of Process Waste from the Transformation Plant

The applicant shall complete an inventory of process waste production for the transformation plant. The inventory shall detail the type and quantity of waste produced (e.g. process scrap and process sludge).

The process waste inventory shall cover a 12-month period and, during that same period, the total product output shall be estimated both in terms of mass (kg or ton) and surface area (m²).

At least 80 % by mass of the process scrap generated from natural stone processing operations

onsite shall be reused in other applications or stored onsite in preparation for future sale.

In addition, a total of 10 points can be granted as follows:

- Up to 5 points shall be awarded in proportion to how much the applicant demonstrates a higher reuse rate of process scrap, up to a maximum of 100 % reuse by mass (from 0 points for 80 % process scrap reuse, up to 5 points for 100 % process scrap reuse).
- Up to 5 points shall be awarded in proportion to how much the applicant demonstrates any reuse of process sludge, up to a maximum of 100 % (from 0 points for 0 % process sludge reuse, up to 5 points for 100 % process sludge reuse).

Assessment and verification: The applicant shall provide a waste inventory for the transformation plant for a period of at least 12 months prior to the date of award of the Turkish Environmental Label license and shall commit to maintaining such an inventory during the validity period of the Turkish Environmental Label license.

The applicant shall provide a declaration of compliance with the mandatory requirement of this criterion, supported by a calculation of total production process scrap (in kg or t). Details about the destination of these process wastes shall also be provided with clarifications about whether it is external reuse in another process or sent to a landfill. For any external reuse or landfill disposal, shipment notes shall be presented.

Criterion 3. 5. Regionally Integrated Production at the Transformation Plant (Optional)

This criterion applies to the shipping distance between the natural stone quarry door and the transformation plant door and is specific to natural stone products originating from a given quarry.

Up to 5 points shall be awarded in proportion to the extent that applicants can demonstrate that the transportation distance for the intermediate dimension stone blocks from the quarry to the transformation plant is less than 260 km (from 0 points if ≥ 260 km, up to 5 points if ≤ 10 km)

Assessment and verification: The applicant shall provide the address of the transformation plant and the address or the geographical location of the relevant quarry gate. The applicant shall also describe the transport mode(s) used to bring the intermediate dimension stone blocks to the transformation plant.

The transport route and total distance shall be estimated and indicated on a map using satellite image maps and freely available distance estimating software.