

# **METHODOLOGY AND USER GUIDE FOR THE FOOD MARKET ECOLOGICAL MODEL (FMEM).**

The purpose of this guide is to give the reader a full description of how a Food Market can qualify for an Ecological Market Certificate. The FMEM is designed for Food Markets in the Bucharest Area. The model has been developed in the project ECOMARKET - a pilot innovative and demonstrative project implemented in the framework of the European Union's Financial Instrument for the Environment –LIFE. The methodology is described from the background of the project to the assessment of the level of impact on the environment from a Food Markets and the possible ways to diminish this impact through the implementation of the FMEM. The Ecological Market criteria and the assessment and verification requirements are also described together with a description of how the possible initiatives to further diminish the environmental impact from the Food Market in question can be identified.

## **1. METHODOLOGY AND BACKGROUND**

The Bucharest Municipality is currently (2003-2005) implementing the ECOMARKET project. The objective of the project is to minimize the environmental impact of food markets (FM`s) that permanently operate in open or partially open spaces, and to demonstrate how eco-labels can be an effective instrument towards environmental sustainability. In relation to food markets the ECOMARKET project has the following specific objectives:

1. To design, test and evaluate an environmental assessment method (EAM) for Food Markets and Retail shops situated within food markets using sustainability parameters and indicators
2. Based on the EAM, a food market ecological model (FMEM) for food markets and a voluntary ecolabelling scheme (VES) for the retail shops within the food markets is being developed and implemented, describing rules and criteria for becoming a certified Ecological Food Market or an Eco-labelled Shop
3. Furthermore the Bucharest City Hall, who is going to administrate these criteria for the FMEM and the VES, is implementing an environmental management system (EMS) in conformance with the ISO 14001 in order to minimize the environmental impact from the largest local public administration in Romania.

## **2. INTRODUCTION AND GENERAL DESCRIPTION OF THE ASSESSMENT METHOD**

This report is describing the developed Food Market Ecological Model (FMEM). For a full description of the developed EAM, which the FMEM is based on, please refer to the document "Technical Guide on the EAM", however - the following briefly describes the EAM.

The objective of the developed environmental assessment method (EAM) has been to be able to assess the level of environmental impact from any Food Market (FM) or retail shop (RS) within a FM by mapping and registration of all relevant environmental data and the following estimation of actual and comparative environmental impact of a shop and/or a FM.

The mapping and registration of assessment data is carried out through the filling in of standardised questionnaires in cooperation between the managers and/or administrators of the food markets and retail shops and experts from the Bucharest City Hall.

In order to assess the data from the FM or RS, an EAM software tool has been developed. After transferring all registered data from a RS or FM to the Software Tool, the calculation of the level of environmental impact is then generated automatically. In this calculation the shop or FM is given a score from A to M on each of the various environmental parameters. "A" equals the best possible score or a relatively low environmental impact while "M" equals the poorest score or a high environmental impact compared to other shops or FM's. In each parameter the scoring Mark (A-M) are assigned based on a point scoring system in which points are given for indicators representing qualitative data like the implementation of monitoring systems and the level of environmental awareness expressed i.e. through the presence of proper waste handling facilities. Furthermore, for water and Energy a scoring Mark for the annual consumption is assigned. Another objective of the EAM has been that it should lead directly to the development of both a Food Market Ecological Model (FMEM) for the Food Markets and a Voluntary Eco-labelling Scheme (VES) for the retail shops within the FM's by identifying relevant environmental parameters and sustainable indicators, and a scoring system all of which can be used as reference in the setting of criteria for being a Ecological FM or an ecolabelled shop. The following is describing the purpose of the FMEM and the use of the FMEM criteria and the use of the developed EAM software to test the FM's ability to comply with these criteria.

### **3. FMEM – BASIC DESCRIPTION AND PURPOSE**

The Food Market Ecological Model is basically an Eco-labelling scheme for the Food Market area including all business areas, business related areas and technical installations (such as waste handling facilities and water supply network etc.) and administrative areas controlled directly by the Food Market management – that is all the Food Market except separate rented business areas (shops) which are not controlled by FM management.

#### **PURPOSE OF THE FMEM.**

The ecological model of food markets (FMEM), aims to limit the main environmental impacts from the three phases of the life cycle of food market trade (purchasing, provision of the service through daily operation of the food market and waste disposal). In particular they aim to:

- limit energy consumption,
- limit water consumption,
- limit waste production and increase/improve recycling ,
- favour the use of renewable resources and of substances which are less hazardous to the environment,
- Promote environmental communication and education.

### **4. FMEM CRITERIA AND ASSESSMENT & VERIFICATION REQUIREMENTS.**

By transferring all assembled data from using the EAM questionnaires into the EAM software tool the FM is given a scoring mark from A to M on the following parameters:

- Energy consumption
- Water consumption
- Water indicators
- Waste indicators
- Assortment indicators

- Internal consumption indicators
- OHS indicators
- EMS indicators

The parameter Noise/Smell that is part of the EAM questionnaires is not included in the automatic assessment as the EAM indicators for this parameter are not easily quantified. But Noise/Smell is indeed part of the FMEM criteria, as can be found in the thorough description of these criteria given in the following:

### **ASSESSMENT AND VERIFICATION REQUIREMENTS.**

The criteria are based on the Environmental Assessment Method (EAM) developed and data collected from Food Markets, during the ECOMARKET project period. The criteria is therefore referring to the scoring system in the developed EA Tool with score marks from A – M, in which “A” is the best score, equivalent to a low level of environmental impact compared to other Food Markets.

The specific assessment and verification requirements are indicated within each criterion. All declarations must be signed by the Food Market Manager

Where appropriate, test methods and standards other than those indicated for each criterion may be used, if this is accepted by the assessing Competent Body (= Bucharest City Hall)

Any documentation that the applicant (THE FM) is required to provide may originate from other sources than the applicant, i.e. suppliers, when needed. The Bucharest City Hall representatives (BCH) can require supporting documentation beyond the stated requirements in this document.

### A. MANDATORY CRITERIA.

#### **All the criteria in this section must be fulfilled.**

#### **ENERGY**

##### **1. TOTAL ENERGY CONSUMPTION**

*The score for the total annual energy consumption (sum of electrical and thermal energy consumption) in the shop shall be equivalent to the mark “F” or better in the ECOMARKET EAM Tool (Comment: This corresponds to a maximum level of 24.8 kWh/m<sup>2</sup> – Including an adjustment of the consumption related to a bonus deduction for the percentage of Energy saving light sources. 50 % of the 20 tested FMs have an annual total energy consumption at the selected max. level or less).*

**Assessment and verification:** *The applicant shall provide information regarding nature and amounts of the energy sources used and the area of the shop including*

#### **WATER**

##### **2. WATER CONSUMPTION**

*The score for the annual total annual water consumption in the shop shall be equivalent to the mark “E” or better corresponding to a maximum consumption of 3.06 m<sup>3</sup>/m<sup>2</sup> (Comment:50 % of the retail shops should be able to comply, based on the data from 20 FM`S)*

**Assessment and verification:** *The applicant shall provide information about the water consumption.*

### 3. WATER INDICATORS

The points scored for the "Water indicators" in the ECOMARKET EAM shall be equivalent to the Mark "D" or better.

#### **Assessment and verification:**

- A. Upon request from the BCH, the applicant shall provide documentation that the environmental impact from using its current water source is negligible. A list of the monitored water quality parameters shall be provided together with documentation for the necessary authorisations.
- B. The applicant shall provide a technical report from professional technicians responsible for the installation of and/or maintenance of the system, stating the annual leakage of the water supply network that the shop is using
- C. Upon request from the BCH the applicant shall provide documentation from the local or national authority that the sewage water is treated correctly, and provide documentation for waste water quality monitoring and sewer maintenance.

## WASTE

### 4. WASTE CRITERIA

The points scored for the "Waste indicators" in the ECOMARKET EAM shall be equivalent to the Mark "E" or better.

**Assessment and verification:** The applicant shall provide a declaration of compliance with this criterion, including:

- A list of the categories the waste is separated into and the procedures for collecting, separating, handling and disposal of these categories.
- The Name(s) of the transporting company(ies) for non-recyclable and recyclable waste and a description of the selected waste handling site for waste other than hazardous waste

## ASSORTMENT

### 5. ASSORTMENT CRITERIA

The points scored for the "Assortment indicators" in the ECOMARKET EAM shall be equivalent to the Mark "G" or better. This means that the FM must comply with 4 of 5 supplementary indicators and have at least 1 eco-friendly product in the assortment.

#### **Comment : Eco-friendly products are:**

- Eco-labelled products
- Energy labelled products or products that in another way have a documented low energy consumption
- Certified organic food **Or** food products that are produced under conditions that are similar to the conditions demanded in the EU control system "Organic Farming"

**Assessment and verification:** The applicant shall provide a declaration of compliance with this criterion, including:

- A list of product groups in the assortment in which the shop does not offer Eco-friendly products together with an explanation why no Eco-friendly products are offered in each of these product groups. This list shall be updated and send to the assessing competent body annually.
- A list of the eco-friendly products/items in the assortment.

## **INTERNAL CONSUMPTION**

### **6. CONSUMPTION CRITERIA**

The points scored for the "Consumption indicators" in the ECOMARKET EAM shall be equivalent to the Mark "G" or better.

**Assessment and verification:** The applicant shall provide a declaration of compliance with this criterion, including:

- A list of products used internally, that are either eco-labelled or Energy labelled
- A list of all cleaning products including name of producer

## **OCCUPATIONAL HEALTH AND SAFETY (OHS)**

### **7. OHS MANAGEMENT**

The points scored for the "OHS indicators" in the ECOMARKET EAM shall be equivalent to the Mark "B" or better.

**Assessment and verification:** The applicant shall provide a declaration of compliance with this criterion, including:

- Names of OHS representatives, Copies of OHS policy and programme of action.

## **ENVIRONMENTAL MANAGEMENT**

Applicants with an Environmental Management system registered under the EMAS Regulation or certified according to ISO 14001 automatically fulfil the mandatory criteria listed below (16-18). The verification of compliance with these criteria is the EMAS registration or ISO 14001 certification. In such case the applicant is obliged to provide the assessing Competent Body with a copy of official registration or certificate.

### **8. EMS CRITERIA**

The points scored for the "EMS indicators" in the ECOMARKET EAM shall be equivalent to the Mark "E" or better.

**Assessment and verification:** The applicant shall provide a declaration of compliance with this criterion, including:

- Copies of policy, programme of action and name of the environmental manager
- A technical report from the previous inspection of energy consuming or -producing equipment from a professional technician.
- Copy of any written guidelines.
- On application the applicant shall provide the data for the consumption of electricity, heating and water and chemicals for at least the previous 3 months, and is thereafter obliged to provide this data annually in January (for the previous year).

## OPTIONAL CRITERIA.

### **SCORING REQUIREMENTS.**

As indicated in the headline of each criterion in this section, all optional criteria are awarded scoring points, giving a maximum total possible amount of 144 points. **The number of criteria complied with must correspond to a total of 65 points.**

## **ASSESSMENT AND VERIFICATION**

- The applicant shall provide a declaration of compliance with each criterion that the shop wishes to be included in the assessment, including technical reports from relevant professional technicians describing installations if relevant, and/or other documentation from relevant third parties if possible.
- In the case of compliance through certificates and/or official registrations (criterion 13 and 14) the applicant shall provide copies of the relevant papers.

## **ENERGY**

### **1. TOTAL ENERGY CONSUMPTION (10 POINTS)**

The total annual energy consumption (sum of electrical and thermal energy consumption) for the FM shall not exceed 290 kWh (Comment: This corresponds to the mark A or B).

## **WATER**

### **2. WATER CONSUMPTION (10 POINTS)**

The total annual water consumption for the FM shall not exceed 2.05 m<sup>3</sup>/m<sup>2</sup> (mark A or B)

## **WASTE**

### **3. SORTING OF WASTE (MAX. 12 POINTS)**

For each of the following extra categories that is sorted and sent to recycling or other environmental preferable treatment: **2 points for each category**

- Plastic (wrapping or containers)
- Metals
- Glass
- Organic waste (i.e. bread, fruit/vegetables etc. NOT meat products or other products that comes from animals) for compost or other treatment or reused as animal feed.
- Dangerous substances
- Other

## **NOISE-SMELL**

### **4. COMPLAINTS/COMMANDS OF IMPROVEMENT (30 POINTS)**

The shop has not received any complaints regarding NOISE (15 points) or SMELL (15 points) from customers or Food Market Management or commands of improvement from local authorities during the previous 12 months.

## **ASSORTMENT AND INTERNAL CONSUMPTION**

### **5. ECO-FRIENDLY PRODUCTS IN THE ASSORTMENT (MAX. 15 POINTS)**

- A. The FM does not sell pesticides (5 points)
- B. The FM has 2 or more Eco-friendly food products in the assortment (5 points)
- C. The shop has 2 or more Eco-friendly products in the product group "Other" in the assortment (5 points)

## 6. ECO-FRIENDLY PRODUCTS IN INTERNAL CONSUMPTION (MAX. 10 POINTS)

- A. The FM does not use products containing active chlorine (5 points)
- B. The shop uses only Eco-friendly cleaning agents for the cleaning of shop premises (5 points).

## OCCUPATIONAL HEALTH AND SAFETY

### 7. OHS CERTIFICATION (10 POINTS)

The shop shall hold an OHS certificate, issued either based on an inspection carried out by the national OHS authority or based on a certification of an OHS management system carried out by an accredited assessing body (certificate issuing company).

## ENVIRONMENTAL MANAGEMENT

### 8. EMAS REGISTRATION OR ISO CERTIFICATION (10 POINTS)

The shop shall be registered under the Community eco-management and audit scheme (EMAS) or hold a certificate according to the environmental management standard ISO 14001 issued by accredited assessing body.

## 5. SCORING SYSTEMS

For each parameter the FM receives a scoring mark from A-M. Each mark is related to a scoring system in which an interval of points corresponds to a mark. The FMEM uses the scorings system from the developed EAM software. In the following the points assigned for each indicator of each parameter in the EAM and the scoring systems for the consumption of energy and water can be viewed.

For each scoring system the required mark and the corresponding required points for Ecological Market Model compliance is marked with **bold, red text**.

**All scoring systems can also be viewed in the EAM software, and the points scored is showed as the questionnaires are filled in.**

The EAM questionnaire used for collection of data from the FMs with all indicators for each parameter can be viewed in appendix 1 to this report.

### **ENERGY:**

The EAM software calculates the scoring mark for the total energy consumption based on the scoring system below, developed by analysing data from 20 Food Markets. The total energy consumption is calculated by summing up electricity and heating energy (all measuring data for heating energy are re-calculated to kWh).

For energy there are no points scored for indicators. The only indicator in this parameter is the percentage of light sources with Energy Mark A or B (according to official EU standards). The FM is instead assigned a bonus for this percentage. The bonus is automatically (in the software) deducted from the total annual energy consumption before the scoring mark is assigned.

- 0-10 : A bonus of 1 % of the total annual energy consumption
- 0-20 : A bonus of 2 % of the total annual energy consumption
- 20-40 : A bonus of 4 % of the total annual energy consumption
- 40-60 : A bonus of 6 % of the total annual energy consumption
- 60-80 : A bonus of 8 % of the total annual energy consumption
- 80-100 : A bonus of 10 % of the total annual energy consumption

Scoring system for Total energy Consumption			
Mark	Consumption data, X= Energy consumption, kWh/m <sup>2</sup>		
A	0	≤ X <	4,7
B	4,7	≤ X <	8,9
C	8,9	≤ X <	13,1
D	13,1	≤ X <	17,3
E	17,3	≤ X <	21,5
F	21,5	≤ X <	25,7
G	25,7	≤ X <	29,9
H	29,9	≤ X <	34,1
I	34,1	≤ X <	38,3
J	38,3	≤ X <	42,5
K	42,5	≤ X <	46,7
L	46,7	≤ X <	50,9
M	50,9	≤ X	

**WATER:**

The EAM software calculates the scoring mark for water consumption based on the following scoring system, developed by analysing data from 20 Food Markets.

Scoring system for Water consumption			
Mark	X= Water consumption, m <sup>3</sup> /m <sup>2</sup>		
A	0	≤ X <	0,62
B	0,62	≤ X <	1,19
C	1,19	≤ X <	1,76
D	1,76	≤ X <	2,33
E	2,33	≤ X <	2,9
F	2,9	≤ X <	3,47
G	3,47	≤ X <	4,04
H	4,04	≤ X <	4,61
I	4,61	≤ X <	5,18
J	5,18	≤ X <	5,75
K	5,75	≤ X <	6,32
L	6,32	≤ X <	6,89
M	6,89	≤ X	

The EAM software calculates the scoring mark for water indicators based on the following scoring system.

Points are scored in the software by answering YES or No to the questions or by selecting the correct interval for various percentages. For the quantifiable percentage related indicators the system assigns from 1-10 points :

0-5 % : 10 points; 5-20 % : 8 points; 20-40 % : 6 points; 40-60 % : 4 points; 60-80 % : 3 points; 80-100 % : 2 points

“Does not Know” : 1 point

For the percentage of toilets with differentiated flush (max. 6 liter pr. flush) points are scored “backwards”, i.e. 10 points are assigned for 80-100 %.

For all other indicators (Yes or No type) the system assigns 6 (in 2 cases 7) points for “Yes” and 1 points for “NO”

<b>Scoring system for water indicators (based on a minimum score of 13 points)</b>			
<b>Mark</b>	<b>X = points scored</b>		
A	93,5	$\leq X \leq$	100
B	87	$\leq X <$	93,5
C	80,5	$\leq X <$	87
<b>D</b>	<b>74</b>	<b><math>\leq X &lt;</math></b>	<b>80,5</b>
E	67,5	$\leq X <$	74
F	61	$\leq X <$	67,5
G	54,5	$\leq X <$	61
H	48	$\leq X <$	54,5
I	41,5	$\leq X <$	48
J	35	$\leq X <$	41,5
K	28,5	$\leq X <$	35
L	22	$\leq X <$	28,5
M		$X <$	22

### **WASTE:**

The EAM software calculates the scoring mark for waste indicators based on the scoring system below.

Points are scored in the software by answering YES or No to the questions, or by selecting the correct interval for various percentages. For the percentage related indicators the system assigns from the following points:

For total waste sent to recycling:

0-5 % : 1 points; 5-25 % : 3 points; 25-40 % : 5 points; 40-60 % : 7 points; 60-85 % : 8 points; 85-100 % : 9 points

Other percentage related indicators:

0-5 % : 1 points; 5-25 % : 2 points; 25-40 % : 3 points; 40-60 % : 4 points; 60-85 % : 5 points; 85-100 % : 6 points

For the indicator “Sorting of waste for recycling (or other treatment than landfill)”:

The system assigns 2 points for each of the following categories that is sorted from the waste: Cardboard, plastic, metals, glass, organic waste, dangerous substances, other (max 14 points)

For all other indicators (Yes or No type) the system assigns 5 (in 1 case 3) points for "Yes" and 1 points for "NO"

Scoring system for Waste indicators			
Mark	X = points scored		
<b>A</b>	94	$\leq X \leq$	100
<b>B</b>	87,3	$\leq X <$	94
<b>C</b>	80,6	$\leq X <$	87,3
<b>D</b>	73,9	$\leq X <$	80,6
<b>E</b>	<b>67,2</b>	<b><math>\leq X &lt;</math></b>	<b>73,9</b>
<b>F</b>	60,5	$\leq X <$	67,2
<b>G</b>	53,8	$\leq X <$	60,5
<b>H</b>	47,1	$\leq X <$	53,8
<b>I</b>	40,4	$\leq X <$	47,1
<b>J</b>	33,7	$\leq X <$	40,4
<b>K</b>	27	$\leq X <$	33,7
<b>L</b>	20,3	$\leq X <$	27
<b>M</b>		$X <$	20,3

#### **ASSORTMENT:**

For assortment points are given for the number of Eco-friendly products in the assortment in 3 product groups:

1. Food :
  - 0 Eco-friendly products : 1 point
  - 1 Eco-friendly product : 6 points
  - 2 Eco-friendly products : 8 points
  - 3 Eco-friendly products : 10 points
  - 4 or more Eco-friendly products : 12 points
  
2. Audio cassettes and CD`S
  - 0 Eco-friendly products : 1 point
  - 1 Eco-friendly product : 3 points
  - 2 Eco-friendly products : 4 points
  - 3 Eco-friendly products : 5 points
  - 4 or more Eco-friendly products : 6 points
  
3. Other products
  - 0 Eco-friendly products : 1 point
  - 1 Eco-friendly product : 3 points
  - 2 Eco-friendly products : 4 points
  - 3 Eco-friendly products : 5 points
  - 4 or more Eco-friendly products : 6 points

For all other indicators (Yes or No type) the system assigns 7 points for "Yes" and 1 points for "NO", except for the selling of pesticides, in which 1 point is assigned for "YES" and 7 points for "NO".

Scoring system for assortment indicators			
Mark	X = points scored		
A	51,9	$\leq X \leq$	59
B	48,9	$\leq X \leq$	51,9
C	45,9	$\leq X \leq$	48,9
D	42,9	$\leq X \leq$	45,9
E	39,9	$\leq X \leq$	42,9
F	36,9	$\leq X \leq$	39,9
G	33,9	$\leq X \leq$	36,9
H	30,9	$\leq X \leq$	33,9
I	27,9	$\leq X \leq$	30,9
J	24,9	$\leq X \leq$	27,9
K	21,9	$\leq X \leq$	24,9
L	18,9	$\leq X \leq$	21,9
M		$X \leq$	18,9

### INTERNAL CONSUMPTION:

The EAM software calculates the scoring mark for INT. CONSUMPTION indicators based on the scoring system below.

Points are scored in the software by answering YES or No to the questions.

The system assigns 6 points for "Yes" and 1 points for "NO", except for the indicator related to contractor requirements, in which 11 points is assigned for "YES" and 1 point for "NO".

Scoring system for internal consumption indicators			
Mark	X = points scored		
A	49	$\leq X \leq$	59
B	46	$\leq X <$	49,1
C	43	$\leq X <$	46,1
D	40	$\leq X <$	43,1
E	37	$\leq X <$	40,1
F	34	$\leq X <$	37,1
G	31	$\leq X <$	34,1
H	28	$\leq X <$	31,1
I	25	$\leq X <$	28,1
J	22	$\leq X <$	25,1
K	19	$\leq X <$	22,1
L	16	$\leq X <$	19,1
M		$X <$	16,1

### OCCUPATIONAL HEALTH AND SAFETY:

In the OHS parameter, points are scored in the software by answering YES or No to the questions.

The system assigns 5 points for "Yes" and 1 points for "NO", except for the 2 indicators related to the Health and Safety organisation and education of representatives, in which 10 points is assigned for "YES" and 1 point for "NO".

For the indicator regarding commands of improvement from the Factories Inspectorate 10 points are assigned for "NO" and 1 point for "YES".

Scoring system for OHS indicators			
Mark	X = points scored		
<b>A</b>	46,1	$\leq X \leq$	55
<b>B</b>	<b>41,9</b>	$\leq X <$	<b>46,1</b>
<b>C</b>	36,9	$\leq X <$	41,9
<b>D</b>	32,9	$\leq X <$	37,9
<b>E</b>	29,9	$\leq X <$	34,9
<b>F</b>	26,9	$\leq X <$	31,9
<b>G</b>	23,9	$\leq X <$	28,9
<b>H</b>	20,9	$\leq X <$	25,9
<b>I</b>	17,9	$\leq X <$	22,9
<b>J</b>	14,9	$\leq X <$	19,9
<b>K</b>	11,9	$\leq X <$	16,9
<b>L</b>	8,9	$\leq X <$	13,9
<b>M</b>		$X <$	10,9

#### **ENVIRONMENTAL MANAGEMENT:**

In the EMS parameter, points are scored in the software by answering YES or No to the questions. The system assigns between 3 and 5 points for "Yes" and 1 points for "NO", except for the indicator related to EMS certificates (11 points for "YES" 1 for "NO"), the indicators related to policy and objectives (10 points for "YES" and 1 for "NO" in each") and the indicators regarding commands of improvement from authorities and complaints from customers, in which 11 points are assigned for "NO" and 1 point for "YES".

Scoring system for EMS indicators			
Mark	X = points scored		
<b>A</b>	159,9	$\leq X \leq$	170
<b>B</b>	149,9	$\leq X <$	159,9
<b>C</b>	139,9	$\leq X <$	149,9
<b>D</b>	129,9	$\leq X <$	139,9
<b>E</b>	<b>119,9</b>	$\leq X <$	<b>129,9</b>
<b>F</b>	109,9	$\leq X <$	119,9
<b>G</b>	99,9	$\leq X <$	109,9
<b>H</b>	89,9	$\leq X <$	99,9
<b>I</b>	79,9	$\leq X <$	89,9
<b>J</b>	69,9	$\leq X <$	79,9
<b>K</b>	59,9	$\leq X <$	69,9
<b>L</b>	49,9	$\leq X <$	59,9
<b>M</b>		$X <$	49,9

## 6. COMPLIANCE TEST

The developed EAM software that calculates the FM's level of environmental impact based on the described scoring systems can also test the FM's ability to comply with the FMEM criteria - both mandatory and optional.

A sheet called Compliance Test has been added to the software.

Here the required marks and optional points scored and needed can be viewed, and this sheet gives a fast overview on the FM's ability to comply with the Model and on which parameters the FM needs to improve their environmental performance.

To test Food Markets (RS) ability to comply with the requirements of the EMM the Food Market (RS) administrator has to deliver a variety of information. This information is gathered by the use of questionnaires that uses environmental indicators within each of the parameters. For each indicator the FM (RS) is then assigned a number of points depending on the environmental soundness of the given situation in the FM (RS) in question. The points scored is used to assess the environmental impact of the FM (RS) by giving a score for environmental performance for each parameter. The score is given in form of a Mark from A to M by using scoring systems in which an interval of points scored (or level of consumption in the case of consumption of water and energy) refers to a Mark. The Mark "A" equals the best possible environmental performance compared to other Food Markets (RS) and a low level environmental impact in general, while "M" equals the poorest possible performance.

The table below indicates minimum level of performance to be reached by a Food Market for being Certified as an ecological one.

### COMPLIANCE TEST

**To comply with the Eco-label criteria, the score for each parameter must equal or be better than the required score. Furthermore the optional points scored must be higher than the required score.**

PARAMETER	Score	REQUIRED Score	Optional points scored	Opt. Points possible
ENERGY CONSUMPTION		E		10
WATER CONSUMPTION		D		10
WATER INDICATORS		D		21
WASTE		E		28
NOISE-SMELL		-		30
ASSORTMENT		G		25
INTERNAL CONSUMPTION		G		
HEALTH & SAFETY		B		10
ENVIRONMENTAL MANAGEMENT		E		10

Optional points scored	
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Optional points possible	144
Optional points required	65

The use of the scoring systems is illustrated by the example of the scoring system applied for Domenii Food Market:

### SCORES FOR DOMENII FOOD MARKET IN 2003

#### COMPLIANCE TEST

To comply with the Eco-label criteria, the score for each parameter must equal or be better than the required score. Furthermore the optional points scored must be higher than the required score.

PARAMETER	Score	REQUIRED Score	Optional points scored	Opt. Points possible
ENERGY CONSUMPTION	C	E	1	10
WATER CONSUMPTION	F	D	0	10
WATER INDICATORS	G	D	9	21
WASTE	F	E	8	28
NOISE-SMELL	-	-	0	30
ASSORTMENT	B	G	20	25
INTERNAL CONSUMPTION	I	G		
HEALTH & SAFETY	A	B	0	10
ENVIRONMENTAL MANAGEMENT	H	E	0	10

Optional points scored	38
Optional points possible	144
Optional points required	65

As it can be seen, in 2003 ( at the beginning of the process ), Domenii Food Market obtained good scores only for energy consumption, assortment and Health and Safety indicators. The optional points scored ( 38 ), are under the limit of the optional points required ( 65 ); In this period Domenii Food Market was a **conventional** one.

## SCORES FOR DOMENII FOOD MARKET IN 2004:

### COMPLIANCE TEST

To comply with the Eco-label criteria, the score for each parameter must equal or be better than the required score. Furthermore the optional points scored must be higher than the required score.

PARAMETER	Score	REQUIRED Score	Optional points scored	Opt. Points possible
ENERGY CONSUMPTION	C	E	2	10
WATER CONSUMPTION	C	D	0	10
WATER INDICATORS	C	D	10	21
WASTE	C	E	21,33333333	28
NOISE-SMELL	-	-	15	30
ASSORTMENT	B	G	20	25
INTERNAL CONSUMPTION	E	G		
HEALTH & SAFETY	A	B	0	10
ENVIRONMENTAL MANAGEMENT	C	E	0	10

Optional points scored	68,33333333
Optional points possible	144
Optional points required	65

As can be seen, during the process, the environment performance in Domenii Food Market increased.

This conclusion arise from the results obtained from the compliance test done in 2004.

The obtained scores are better than the required ones for all indicators, and also, they have more optional points scored ( 68.33 ) than the required optional points ( 65 ).

On these bases, we concluded that Domenii Food Market reached the required level of performance to be certified as ecological Food Market.

The same system of evaluation was applied for Obor Food Market and also for all 5 Retail Shops.

The procedures to apply for EFM and VES are identical, and consists in the following steps:

1. A official request from the applicant, addressed to BCH – Environment Protection and Ecocivic Education Directorate;
2. The applicant receives the necessary informations and documents from us:
  - Technical Guide on the EAM ( Annex no. 7 to the Final Report );
  - Methodology and User Guide for the FMEM ( Annex 13 to the Final Report ) or Manual and Instructions for the application of the VES, ( completed with this description );
  - List of applicable parameters;
  - The corresponding questionnaires to be filled in;
3. The applicant submit the initial filled questionnaire to BCH;
4. BCH – Environment Protection and Ecocivic Education Directorate makes the initial environment assessment;
5. BCH – Environment Protection and Ecocivic Education Directorate identifies and inform the applicant about the environmental indicators who didn't complies with the requirements and must be improved;
6. For improving environmental indicators who didn't complies with the requirements BCH -- Environment Protection and Ecocivic Education Directorate acts as a consultant during the improvement process of the environment performance and makes environment assessments.
7. When the environment assessment shows that the level of performance was reached, and all indicators obtained with the compliance test are better than the requested mark, the applicant will be certified as an Ecological Food Market respectively as a VES Retail Shop;

# Appendix 1.

## EAM Questionnaire for FOOD MARKETS

Name .....

Address.....

Contact person .....

Telephone.....

Surface.....

Run. No.	Indicators and parameters	Answers and notes
<b>I</b>	<b>ENERGY</b>	
1	<i>Electrical energy consumption</i>	
1.1	Annual electrical energy consumption in kWh;	
1.2	Specific electrical energy consumption per total surface kWh/m <sup>2</sup> ;	
2	<i>Thermal energy consumption</i>	
2.1	Annual thermal energy consumption in kWh, m <sup>3</sup> or kg;	
2.2	Type of source used:	
2.2.1	Electrical energy;	
2.2.2	Liquid fuel;	
2.2.3	Natural gas;	
2.2.4	District heating;	
3	<i>Lighting</i>	
3.1	Percentage of light sources with energy mark A or B?	
4	<i>Ventilation, heating and cooling</i>	
<b>II</b>	<b>WATER</b>	
1	<i>Water consumption</i>	
1.1	Is the annual water consumption measured in m <sup>3</sup> ?	
1.2	Specific water consumption per total surface in m <sup>3</sup> /m <sup>2</sup> .	
1.3	Does the FM have its own water supply network?	
1.4	Percentages of annual leakage on the drinking water supply network?	
1.5	Percentage of the water quantity supplied to the shops?	
1.6	Does the FM have its own water supply source (water wells)?	
1.6.1	Is there a monitoring system for the quality of water supplied from the FM's own source?	
1.6.2	Has the FM obtained all the authorisations necessary for their own water sources' operation?	
1.6.3	Percentage of drinking water supply from the FM's own source?	
1.6.4	Is there a programme for maintenance/repair of the water source?	
1.7	Has the FM concluded a contract for water supply/sewer services with the water supplier?	
2	<i>Installations</i>	

Run. No.	Indicators and parameters	Answers and notes
2.1	Percentage of toilets with differentiated flush (3 or 6 litres pr. Flush)?	
3	<i>Wastewater discharge</i>	
3.1	Does the FM have its own sewer?	
3.2	Percentage of the sewer made of asbestos cement?	
3.3	Percentage of the sewer which is damaged?	
3.4	Is there a programme for sewer maintenance and repair?	
3.5	Wastewater quality	
3.5.1	Does the FM have its own system for monitoring of the wastewater quality indicators?	
3.5.2	Percentage of CBO5 in wastewater?	
3.6	Has the FM concluded a contract for taking over the wastewater with an authorised company?	
3.7	Is there a system for the wastewater treatment or pre-treatment prior to discharging wastewater in the municipal sewer?	
<b>III</b>	<b>WASTE</b>	
1.	Percentage of waste sent to recycling?	
1.1	Percentage of dangerous substances in the total waste sent to recycling?	
1.2	Percentage of PVC and plastic wrapping foil in the total waste sent to recycling?	
1.3	Percentage of cardboard or semi-cardboard in the total waste sent to recycling?	
2	Percentage of waste sent to incineration?	
3	Which fractions is the waste sorted into?	
4	Sorting of waste in the fractions stated by the local government, or as a minimum sorting at source and recycling of cardboard?	
5	Are there buffer areas for temporary waste disposal?	
5.1	Are these buffer areas for waste temporary disposal equipped with protection against soil and groundwater contamination and wastewater spillage	
6	Is waste disposed of in dedicated bins?	
6.1	Are the bins appropriate for the type of waste disposed of in them?	
6.2	Are the bins labelled and easily identifiable/localisable to facilitate their appropriate use?	
6.3	Are the bins appropriately used?	
6.4	Are the bins replaced /maintained appropriately?	
6.5	Are the bins emptied on time?	
7	Has the FM concluded a contract for waste disposal with an authorised company?	
7.1	For non-recyclable waste	
7.2	For recyclable waste	
<b>IV</b>	<b>NOISE – SMELL</b>	
1	<i>Noise</i>	
1.1	Generated by products' supplying activities	
1.2	Generated by stands that sell audio CDs and cassettes	
1.3	Others	
2	<i>Smell</i>	
2.1	Generated by grilled forcemeat balls and fish	
2.2	Generated by various goods such as sauerkraut, cheese, pickles	

Run. No.	Indicators and parameters	Answers and notes
2.3	Generated by production activities (baking, etc.)	
2.4	Generated by waste collection or the sewer (mainly during summer)	
2.5	Generated by vehicles (supplying, customers)	
2.6	Others	
<b>V</b>	<b>ASSORTMENT</b>	
1	<i>Organic products</i>	
1.1	Fresh or dried vegetables and fruits	
1.2	Animals	
1.3	Coffee and tea	
1.4	Other ecological products	
2	<i>Which of the following product groups is in the assortment? Specification by number of items that are certified organic, or that holds a recognised eco-label or energy-label in each group.</i>	
2.1	Food	
2.2	Audio cassettes and CDs	
2.3	Others	
3	<i>Supplementary questions</i>	
3.1	Are all the ecological items in the assortment clearly marked as being environmentally friendly?	
3.2	Are customers provided with information on the environmentally friendly products?	
3.3	Are differentiated the GMOs through a label applied by the FM?	
3.4	Does the shop sell pesticides?	
3.5	Are more than 25% of the items in the assortment produced in the national area?	
<b>VI</b>	<b>INTERNAL CONSUMPTION</b>	
1	Are there requirements for the contractors/ regarding environmentally production and introduction of environmental control?	
2	Are products that do not contain environmentally harmful substances selected?	
2.1	Are products nationally produced preferred?	
3	Is there a list of products that the FM does not sell for environmental reasons?	
4	Does the FM use eco-labelled office equipment:	
4.1	Writing materials?	
4.2	Paper?	
4.3	Office machinery?	
5	Does the FM use eco-labelled cleaning agents?	
6	Does the FM sell products that contain chlorine?	
<b>VII</b>	<b>OCCUPATIONAL HEALTH AND SAFETY</b>	
1	Is a security organisation with security representatives for the employees and management established?	
2	Have the security representatives received the compulsory occupational health and safety education?	
3	Has the shop stated objectives/goals for occupational health and safety?	
4	Has a Working Place Evaluation been completed in accordance with the guidelines from the Factories Inspectorate (Public Authority on the Occupational Health and Safety area)?	

Run. No.	Indicators and parameters	Answers and notes
5	Does the shop management conduct annual appraisal interviews?	
6	Has the shop received any commands for improvement from the Factories Inspectorate?	
7	Has the shop formulated a smoking and alcohol policy?	
8	Is there a plan/programme of action for reducing the number of days lost through illness?	
<b>VIII</b>	<b>ENVIRONMENTAL MANAGEMENT</b>	
1	<i>Environmental Management related questions</i>	
1.1	Does the store or chain have an EMS certificate with reference to ISO 14001 or EMAS (Eco Management and Audit Scheme – the Official EMS system of the EU)?	
1.2	Is an environmental policy formulated in writing?	
1.3	Are environmental objectives formulated in writing?	
1.4	Does the shop have records on:	
1.4.1	Consumption of electricity and heating	
1.4.2	Water consumption	
1.4.3	The amount of refuse/waste in the different fractions	
1.4.4	Consumption of cleaning agents	
1.4.5	Own vehicles' consumption of fuel	
1.5	Are employees kept informed on:	
1.5.1	Consumption of electricity, heating and water	
1.5.2	The amount of waste in the different fractions	
1.5.3	Consumption of cleaning agents	
1.6	Has the shop developed a plan of action for environmental initiatives and improvements?	
1.6.1	Does this plan/programme involve the following aspects:	
1.6.1.1	Reduction of energy consumption	
1.6.1.2	Reduction of water consumption	
1.6.1.3	Reduction of the amount of waste	
1.6.1.4	Improvement of transports	
1.6.1.5	An increased share of environmentally friendly products	
1.6.1.6	Reduction of chemical products' consumption (e.g., cleaning agents)	
1.7	Has the FM manager appointed an environmental coordinator?	
1.8	Are there any written guidelines for:	
1.8.1	How the refuse/waste is to be sorted into fractions?	
1.8.2	How energy can be saved?	
1.8.3	A waste management plan?	
1.8.4	Operation and maintenance of electrical installations?	
1.8.5	Control and maintenance of water installations?	
1.9	Are there written guidelines on employees' knowledge of environmental issues and abilities to co-operate in reducing the shop's environmental impact?	
1.10	Are there any routines for operation and maintenance for	
1.10.1	Energy consuming devices and installations?	
1.10.2	Water installations	

Run. No.	Indicators and parameters	Answers and notes
1.10.3.	Waste sorted into fractions	
2	<i>Public relations</i>	
2.1	Environmental knowledge	
2.1.1	Eco-labelled products in the assortment?	
2.2	Customer service	
2.2.1	How does the management prioritise the employees' general environmental inputs in the customer-related services?	
2.3	Environmental alternatives	
2.3.1	Are employees obliged to provide information on alternatives there is more environmentally friendly to the products in demand?	
3	Has the FMs received any commands of improvement or complaints from the authorities in the environmental area or from the customers? (If what, related to what issues?)	