Analysis of self-declared environmental labels

Analiza samodeklariranih ekoloških oznak

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Abstract: Environmental labelling today presents one of the tools for environmental protection improvement. Expanse of eco-labelling is connected with the invention of firms that care for environment can make profit. Result was appearance of different declarations, claims and environmental labels on products and service. This trend, in the first phase influenced consumers in finding a way to act more environmentally advisedly through "green buying". In the next phase, by the appearance of large number of eco-labels, this trend caused confusion and scepticism of certain consumers.
In response to a number of misleading marketing claims in the late 1980s and early 1990s, in June 1993 a subcommittee of the International Organisation for Standardization (ISO) Technical Committee on Environmental Management began work on standards covering environmental marketing claims. The result was the standard ISO 14020 and the definition of three types of eco-labelling. In this article detailed analysis of eco-labelling fitting under the type II, according to ISO 14020 standard, is given.

Izvleček: Sedaj je okoljsko označevanje eno najpomembnejših orodij za dvig nivoja varovanja okolja. Širjenje okoljskega označevanja je povezano z dognanji podjetij, da skrb za varovanje okolja prinaša tudi dobiček. Rezultat tega je pojav različnih deklaracij, zahtev in okoljskih oznak za proizvode in storitve. Ta naravnanost, je v prvi fazi vplivala na potrošnike v smislu iskanja načina za ekološko delovanje z „zelenim nakupovanjem". V naslednji fazi se je zaradi prevelikega števila ekooznak pojavljala zmedenost in skeptičnost med potrošniki.
Kot odgovor na številne nejasnosti marketinških trditev v poznih osemdesetih in začetku devetdesetih let prejšnjega stoletja je v juniju leta 1993 podkomite Mednarodne organizacije za standardizacijo (ISO) začel delo pri standardih, ki obsegajo ekološko-marketinške trditve. Rezultat njihovega dela je standard ISO 14020 in definicija treh tipov ekoozačevanja. V prispevku je podana detajlna analiza ekoloških oznak tipa II po standardu ISO 14020.

Key words: environmental labels, self-declaration, ISO 14020, type II, claims
Ključne besede: ekološke oznake, samodeklarirane, ISO 14020, tip II, trditve

Review paper

Introduction

More expressive environmental consciousness put the demand to manufacturers that they should offer marketplace products that are pleased by high ecological standards[1]. There is growing interest among consumers, governments, and businesses in the environmental aspects of products, such as product energy efficiency, product take back and recycling, and use of hazardous materials are increasingly a part of the buying decision[2]. This is particularly true in the more environmentally aware markets of northern and central Europe and Japan. This recognition for products with environmentally preferable attributes has prompted green procurement activities in markets around the world and created the need for systematic and standardized communications with respect to environmental claims for products[3].

Environmental labelling is one of results of concern for environment, on local, as on global level. On their expanse the most influence had "invention" of firms that through careness for environment can make profit. So different declarations, claims and environmental labels appeared on products and service (for example, natural, recycle, eco-useful, low-energetic, etc.). However, this trend by one side influenced on consumers to find a way to reduce damaging on environment choosing buying, but on the other side provoked confusion and scepticism of certain consumers.

In response to a number of misleading marketing claims in the late 1980s and early 1990s, in June 1993 a subcommittee of the International Organisation for Standardization (ISO)[4] Technical Committee on Environmental Management began work on standards covering environmental marketing claims[5]. This was in response to growing international concern about the lack of consistent guidance for environmental claims and for eco-labels. Result is defining three type of eco-labelling by ISO[6]:

- Type I - a voluntary, multiple-criteria based, third party program that awards a license that authorizes the use of environmental labels on products indicating overall environmental preferability of a product within a particular product category based on life cycle considerations,
- Type II - informative environmental self-declaration claims, and
- Type III - voluntary programs that provide quantified environmental data of a product, under pre-set categories of parameters set by a qualified third party and based on life cycle assessment, and verified by that or another qualified third party.

The basic of environmental self-declared claims is security of reliability. It is important properly conduction of verification, in the aim of interruption negative marketing consequences, such as marketing abutment or unfair practices, which can ensue from disputable and deceivable environmental claims. Method of prediction environmental self-declared claims have to be clearly, transparent, scientifically supported, so potential customer of product can be sure in validity of claims[7]. In the following part of this article, detailed analysis of eco-la-

belling fitting under the type II according to ISO 14020 standard, is given[8].

Basic principles, definitions and procedures of environmental labels type II

Significant phase of developing ISO standard about self-declared environmental claims is evolution of ISO 14021, international standard that defines type II ecolabelling - self-declared environmental claims, issued in 1999.

A self-declared environmental claim is a declaration, a label or a symbol which draws attention to a certain element of the organisations activities, products or services and which can influence the environment. It is a special type of advertising. It is related to the product, its component or packaging. It can take the form of a statement, a label or a symbol placed on the product or on the products packaging, in the products documentation, in technical bulletins, in advertising and promotion, in TV marketing or possibly by means of digital and electronic media, such as the Internet. It can be issued by producers, importers, distributors, retailers or any other people that might benefit from such declarations. The parameters, environmental aspects which are intended to prove the products environmental friendliness, are chosen by the company-claimant themselves.

Environmental claims allow consumers to more easily differentiate between products in the market, so consumers can make better purchasing decisions in relation to the environment. In turn, consumer's purchasing power for such products is a market driver for business - to invest in more sustainable environmental practices[9]. The main advantage of the self-declared environmental claim is the opportunity to attract the attention of all target groups in a simple way, at a very low cost. Other advantages include:

- reducing the uncertainty in the market (credible information for consumers),
- facilitating international trade, and
- wider opportunities for customers, potential customers and users of the product to make a better informed decision when choosing a product.

Procedure for obtaining environmental labels

Before manufacturer decides to use self-declared environmental label, it is important to ascertain if there is some specific law or convention in which is requested how that environmental information need to be issued. Conventions are used for better understanding of minimal postulation, and to assure that claim/label is used properly by potential user.

Since Type II eco-labelling is more liable to an abuse, international standard ISO 14021 are proscribed exact directions for giving this declaration about product[7]. There are three main elements to be taken into account when considering making a self-declared environmental claim:

- the quality of the actual information being communicated (content),
- the way in which the information is presented (presentation), and
- the steps and methods taken to verify its accuracy (assurance of accuracy).

The content of the claim should be:
- correct and truthful,
- relevant,
- specific and unambiguous – especially when making a comparison.

The presentation of the claim should ensure that:
- the claim uses plain language,
- all relevant information is presented together,
- the meaning of any symbols or pictures is clear and relevant.

To ensure accuracy all claims should be:
- substantiated and verifiable,
- reassessed and updated as necessary,
- based on the best agreed standards available,
- supported by information needed to verify its accuracy.

Basic demands for correct and true environmental claims

While it might appear obvious that any environmental claim ought to be correct and truthful, this is not always easy to achieve. In particular, an environmental claim can be literally true, but still capable of being widely misunderstood or misinterpreted. This can be sold:
- consider how an ordinary member of the public, not an expert, might understand the claim;
- don't make claims, even when they are literally true, if they are likely to be misinterpreted;
- avoid claims indicating an environmental benefit that, while literally true, is unlikely to happen in practice,
- make sure a single environmental benefit isn't restated using different terminology to infer multiple benefits,
- if a claim relates to a pre-existing, but previously undisclosed aspect, don't make a claim inferring a recent improvement or enhancement,
- make sure that any claim indicating that a product is free of a specified substance contains no more of that ingredient than would be found as an acknowledged trace contaminant or background level. The threshold level used should be specified.

Basic demands for relativity of environmental claims

Relevance is about enabling customers to understand the context within which the claim is made. Environmental claims:
- make sure the claim is relevant to that particular product,
- make sure the claim is relevant to the place where the corresponding environmental impact occurs,
- clearly indicate whether the claim refers to the whole product, or just part of it, or just the packaging,
- do not make claims that imply that a product is exceptional when in fact all products in the marketplace share the same characteristic. The exception to this rule is where significant levels of consumer concern exist and consumers do not realise that it is a legislative requirement that all products share the same characteristic. In this scenario, the claim should be qualified, for example by the statement "in line with similar products …" or "as required by law …",
- don't make a claim based on the absence of ingredients or features which have never, or have not for some time,

been associated with the product category;
- regularly review and update all claims to ensure that they remain relevant in view of changes such as new legislation being enacted, improvement in the environmental performance of competing products and technological advances,
- make sure that any claim is used only in circumstances where there is a net environmental benefit associated with the product.

Basic demands for specific and unambiguouing of environmental claims

Ensuring that environmental claims are specific and unambiguous will help ensure that customers fully appreciate their intended meaning. The worst examples of this kind of labelling are those that are highly generalised, such as "environmentally friendly" or "nature's friend". It is this kind of poor quality labelling which has, in the past, discredited all forms of environmental labelling. This can be anticipating as:
- Make clear what environmental impact or improvement the claim relates to. A claim should identify exactly why a product is better for the environment and make a specific statement to that effect. Vague or non-specific environmental claims should never be used.
- Make clear the level of environmental improvement or performance achieved.
- If the claim involves a comparative assertion:
  - make clear the basis for the comparison
  - quantify the claim using either percentages or absolute values as appropriate
  - always make a comparison against a comparable product serving similar functions, either currently or recently in the same marketplace
  - only make a claim against: your own prior products or processes or/ and another organisation's products or processes.

Basic demands about understanding of environmental claims

It is possible for the information associated with a product to meet all the criteria referred to above, and yet still be unhelpful to customers as a result of the way that it is presented. To be sure that none of these cases appear, it is need to:
- make sure that any further information needed to understand an environmental claim is not buried in the small print,
- do not use language that exaggerates the advantages of the environmental feature the claim refers to,
- make sure that any symbols or logos are used in a way that their intended meaning is clear, if necessary by adding an explanatory statement,
- symbols used for environmental claims should be easily distinguishable from any other symbols found on products,
- natural objects such as trees, flowers or animals, should only be used if there is a direct and verifiable link between the product, the object and the environmental benefit being claimed. This link should be clearly explained.

Basic demands tied up with exact of environmental claims

There is no requirement to use third party verification or certification before an environmental claim is made, but it should be substantiated and verifiable. A business' own internal procedures may very well be able to perform this function. In addition, information should be retained by the person making the claim and supplied to anyone seeking justification of it.

In the aim of prevention arising of problem in relation with the previous need to be observed by next instructions[9]:

- check that the claim is fair and truthful, whether by testing the product or otherwise,
- don't make a claim if it could only be verified through access to confidential business information,
- document and retain information that others may need to verify any claims made,
- if the claim is a comparative claim, this should include data relating to the product with which the comparison is made.

Symbols of self-declared environmental labels

Symbols that are used for needs of self-declared claims need to be simple, easily reproducible and by position and size liable to product.

Usage of environmental labels and symbols serve as important source of information about product and producer. Usage need to be avoided in case they provoke wrongly interpreted definition and meaning of symbol by consumer. If company decides to announce this symbol, need to obligated (itself) that symbol owns an advantage qualities over similar products, services and companies. To avoid confusion, should avoid similarity with current official symbols. Explaining of environmental labels, with the definition and meaning need to be on package, promoting and other marketing material, and also instruction where can be find detailed information about label. More details can be found on web site, too. Possibility of checking and verification of evidences that support usage of environmental label must exist. Usage label/symbol to marketing causes must be in accordance with national marketing law, also in advancing defined criteria about ecological environmental claims. „Official labels" need to be mentioned here. Their usage is regulated and observed by competent organs, with advancing defined criterions[10].

Evaluation and verification procedures of self declared environmental claims

A person stating an environmental claim has to be responsible for evaluation and gathering of data necessary for verification of self declared claims. Prior to designing a environmental claim, additional evaluation measures have to be implemented in order to come to reliable results necessary to verify the statement. Evaluation has to be documented in detail, and person that voices the environmental claim has to adopt documentation in order to make the information public. This has to be applied to a period while the product was present in the market and to a realistic period after that, taking into account products shelf life.

Methods for verification and evaluation of environmental labels have to be supported by chronologically ordered following documents:

- international standards,
- standards easily identified and recognizable as well as internationally accepted (this also applies to regional and international standards), and
- industrial and merchandizing methods to which the same examination method will be applied.

In cases where the methods are not in place, the person putting forward an environmental claim can suggest a method, providing that the method is in line with other requests and that it is possible to examine it. Environmental labels are certified only in cases when classified business information has not been used. The labels shouldn't be shown if the only way to verify them is through classified business information. Environmental labels can voluntarily offer to the public information necessary to verify it. Otherwise, information which is necessary to verify the symbol has to be, at request and at reasonable expense, made public (which are covering the administrative expenses), time and place, to each individual wishing to check stated environmental labels.

The minimum information necessary, which are documented and adopted, should include the following[7]:

- identification of standards or methods used,
- proof in a form of a document if marking a environmental label cannot be checked on final product,
- results of the checking which are necessary to verify a environmental claims,
- name and address of an independent party, should the checking be implemented by an independent party,
- if self declared environmental claim cover comparison with other product, it has to exist highlighted description of applied method, results of any examination of these products and all potential assumptions,
- proof (statement) that evaluation of environmental claim by individuals pronouncing it offers guarantees on continuity of self declared environmental claim accuracy while the product is in the market and within particular period after, taking into account the product's shelf life.

The most applying environmental labels

There has been a number of type II environmental labels developed and actively used. However, among them, according to how often are they used and to which extent they are being recognized globally, there are several which are widely known. They are as follows: Mobius loop (environmental label for recycling), Green dot, Energy star, Pitch in, and Ozone friendly[9].

Self-declared environmental labels used for recycling

The original recycling symbol was designed in 1970 by Gary Anderson from L.A. University. He was sent to an International Design Conference as a part of

a wider competition between university students. The competition was a result of an increasing interest of consumers in environmental protection.

The symbol represents Mobius loop which is consisted of three interconnected arrows shaped as a triangle with somewhat rounded angles. Each arrow is being backwards bended and all three are connected to each other which in a way represents recycling cycles.

RE + CYCLE = repeated circulation: There is a common opinion that this is a recycling symbol, but that is only a partial answer. Originally the meaning of this symbol was a much broader one. That is a symbol for three "R" related to environment[11]: Reduce, Re-Use and Recycle.

Reduce - Re use - Recycle are the basic postulates of total waste management, in the first place the emphasis on avoiding waste, reduce it's amount, intention for its re use, it's repeated use, recycle and process giving new purposes to products and only in the end, what cannot be used will disposed in a way that will not be harmful for both the environment and our health. The reason why there is a common opinion that this is only a sign that symbolizes recycling, has been formed, according to many independent environmental movements and associations, because out of its three components, recycling is the most profitable ones. Mobius loop is a self declared environmental label whose use is not charged, but its use has been technically regulated. The label cannot be used in any modified shape and companies will adopt it as it is, as their logo or another brand. Specific requests that regulate the use of Mobius loop can be found in ISO standards. Having in mind that the consumers might not be fully aware of exact meaning of the symbol when it is presented in a different form, it is considered to be a good practice if it is published along a short explanation.

This symbol hasn't been protected and it is used in various ways and in different versions. In its most general sense it points out to the following facts[6]: that the product (or one of its parts) could be recycled or that recycled material has been used for the production of that particular item.

Recyclability is the most frequent sense of using the Mobius loop. It is being applied to products made out of recyclable materials.

Graphic design of the label is in Figure 1. The original Mobius loop graphic has been given in Figure 1 a), but the variation of the original symbol – in colour, which is used first of all because of the need to fit it with the design of the product or its emphasis (Figure 1b) and - *generic* (Figure 1c) derived from the original symbol that is used in cases when it is necessary to simplify the design for the applied production technology (for example in cases of tools for plastic, processing when cutting is used etc.). To generic version often some specific sign and markings are added pointing to the material from which they are made of: steel – made out of steel, alu - aluminium, pap - paper, special marking of plastic etc.[12].

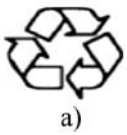

Figure 1. Mobius loop – variations of graphics used for term "recyclable"

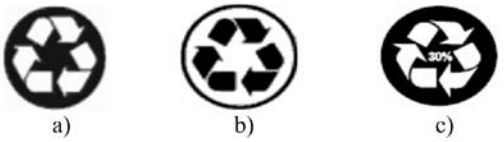

Figure 2. Versions of Mobius loop graph with application to products produced out of recycled material

This symbol is used to mark products which can be recycled e.g. those that can be recycled if the local community secured suitable conditions for collection and separation of waste.

The term "recyclable" can be used when there is evidence that[13]:

- the collection, sorting and delivery systems to transfer the materials from the source to the recycling facility are conveniently available to a reasonable proportion of the purchasers, potential purchasers and users of the product,
- the recycling facilities are available to accommodate the collected materials,
- the product for which the claim is made is being collected and recycled.

Recycled – when recycling material is used in producing a certain product to a certain extent, Mobius loop in a circle is being used. (Figure 2 a and b) and similar to previous case there are variations of graphic solution depending on the need. The most frequent ones are paper and cardboard products and nowadays more and more plastic products. In many cases a percent is placed in the centre of the symbol which tells us what is the percentage of recyclable material contained in the product (Figure 2 c)[12].

Environmental protection symbol – „Green dot"

Symbol „Green dot" started to be used in Germany within "Grüne Punkt" programme which is considered a prerun of the European programme. The original of this symbol (Figure 3) was presented in 1991 by „Duales System Deutschland" a non profit organization. Since 1994, it has been accepted by EU member states as well as some other European countries.

Figure 3. The original image of environmental symbol „Green dot"

The licence to use „The Green dot" has been transferred to an organization PRO Europe (Packaging Recovery Organisation) whose seat is in Brussels, Belgium and who is today a general representative of the Green dot. The Green dot is also an umbrella association that gathers several national organized industries that are successfully dealing with wrapping material waste in over 27 states of European Union[6].

By joining the green dot programme, the manufacturers are free of any commitment to take back the wrapping material of their products. The green dot is a registered symbol that is allocated to a wrapping and not to the product itself. The trade mark of the green dot could be placed on the package only once the product becomes licensed. The price of the license varies from state to a state and producers have to register individually with the programme in each of the countries to which they want to export their goods to. Payment is based on a principle „the producer pays" and it takes into account all expenses of gathering, sorting and recycling of various wrapping materials. The price depends on the state and material type that is used to produce the wrapping material. The system contributes to decreasing the level of waste as the producers that shrink their packaging are paying less. After the registering once in a month, tree month or on annual level, the companies have to submit the reports to the national programme of the green dot on waste creation. Only those companies that are doing their business in Europe can gain the green dot licence. Non European companies, therefore, often depend on their distributors in the process of getting a hold of the licence. This may result with the loss of control over finance or administration, conflict of interest if the cooperation is with several distributors in one state, in the loss of multiple reports from various distributors or confusion and additional work once the distributor is changed.

The green dot is one of today's most used symbols on environmental protection in the world. Currently, the standard of the return programme in 23 EU states and Canada and it is applied by over 130.000 companies that cover 460 billion packages[14].

Environmental label - "Energy star"

The global warming and the other global problems regarding environment are closely connected to the use of energy. In the last years, the energy consumption in the offices and especially in the households has been drastically increased, which in developed countries, this became a focus problem. Under such circumstances, at the end of 1992, the International program "Energy Star"[14] has started as a result of an agreement between Japan and the USA, which represented the collection of criteria for the decrease of the energy consumption, concerning office equipment with the major goal – the environmental protection. Later the other countries (Australia, New Zeeland, Taiwan Canada, etc.) supported and joined the program, and the process of EU countries joining to the program is ongoing.

Figure 4. Graphic presentation of the environmental label "Energy Star"

The program is applied in the market by placing the label "Energy Star"(Figure 4) on the products, which have shown that such products satisfy the program special criteria for the energy saving, and to, regardless their price, point out the advantage of the products to the consumers,

which is the environmental protection through saving of the energy. The label could be placed on the product, its wrappings or in the product documentation. By supporting this program the consumers are in the position to directly influence the environmental protection and to save their budget, by saving the energy, while the manufacturers, traders and the distributors are stimulated to produce, sell and promote such products, even more.

The Energy Star program was created in 1992 by the United States Environmental Protection Agency in an attempt to reduce energy consumption and greenhouse gas emission by power plants. The program was developed by John S. Hoffman (inventor of the Green Programs at EPA), and implemented by Cathy Zoi and Brian Johnson. The program was intended to be part of a series of voluntary programs that would demonstrate the potential for profit in reducing greenhouse gases and facilitate further steps to reducing global warming gases.

Since 1992 "Energy Star" becomes an international standard for energy efficiency of electronic equipment, and represent, perhaps, the most recognized type II labels. A recent agreement between the U.S. government and the European Union on development and use of the Energy Star label opens the way for further international acceptance of the logo. While the U. S. EPA along with the EU now establishes Energy Star criteria, manufacturers are allowed to self-certify compliance[14]. Organizations which are interested in connection with "Energy Star" are necessary to predict next steps if they want their products bee allowed by this programme:

- consider producer terms,
- consider product specifications, legal criteria, and partnership documents (which are on website www.energystar.gov),
- define the area of interests in this partnership, and describe its products filling in obliged form,
- review, complete, and sign agreement about partnership,
- register agreement about partnership and obliged form to "Energy Star".

Environmental label "Pitch-in"

Environmental label "Pitch-in" (Figure 5), which symbolizes a person who cleaning environment, is accepted in 1976 by non-profit international organization "Clean World International".

Figure 5. Format of eco-label "Pitch-in"

Unlike the other recycling symbols, this symbol is not primarily used to identify materials for separation, but it is widely used in the context of public education and outreach for anti-littering efforts. The use of this symbol is not limited to one country and therefore makes it a good candidate for inclusion in an international standard[12].

Environmental labels in conjunction with ozone protection

The labels and statements that certain

product is "Ozone Friendly", as it is often formulated falls under the so called, general statements, which means that there is no legal frame, or standards, that would regulate such type of label. Therefore the manufacturers decide themselves whether to use this statement or not, which tells us that such type of label could easily be misused for the interest of a manufacturer.

Ozone friendly is a claim that implies that the product or packaging has some kind of environmental benefit or that it causes no harm to the environment[15].

Figure 6. The environmental labels regarding ozone protection

"Ozone friendly" label can be found in most cases on deodorants and refrigerators. It means that the product does not contain CFC [Chlorofluorocarbons] gas (Figure 6), that contributes to the ozone layer depletion. There are German - "Ozon freundlich", "FCKW-frei", and French lection – "Preserve la couche d'ozone"[16].

All products have some environmental impact. Some manufacturers may cite specific reasons why they consider a product to be "ozone-friendly," while others may not. Some chemicals, like chlorofluorocarbons (CFCs) can damage the ozone layer. CFCs were banned in nearly all consumer products in 1978. Without more specific information, there is no way to determine whether products labelled "ozone friendly" is in any way better for the atmosphere than other products. To learn more about what is meant by this term, consumers must contact the manufacturer.

The International Standards Organization (ISO) considers this claim to be too vague to be meaningful to consumers. To comply with the ISO standard for environmental claims companies must not use "ozone-friendly" on their products.

Conclusions

In the European Union and the other developed countries, the programs of the ecolabeling are acting in large and the products without environmental label have difficult passage to the global market or are disabled in some cases.

Very important aspect is, however, a responsible use of environmental labels, otherwise, their use would have little sense, and therefore, the good organization and the efficiency of the system and the institutions are more than necessary.

Important problem is also the development of the infrastructure that should pro-

vide the sustainability of the application of these programs. As an example, we can again use the recycling label and green dot, which among the rest include the existence of the recycling machine of the satisfying capacities.

There is an urgent need to give great attention to:

- The education of the manufacturers about their benefits if they apply this sort of eco-labels and about the obstacles they can have if they do not apply it, and
- The education of the consumers for better understanding of the meaning of certain eco-labels and the influence of the labelled products on the environment.

Uplifting of the educational level of the mentioned subjects, regarding above cited, will have a synergetic effect to both, rising of the level of ecological consciousness and environmental protection in our country.

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