

IMPLEMENTATION OF ISO 14001 IN BULGARIA

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Abstract

In the last years, the Bulgarian business organizations and government bodies were facing with the increased needs to implement new standards which could bring a higher benefit for companies and also not to affect the environment. The ISO 14 000 Family is based on standards for environmental management and gives the possibility to be applied in any type of organization, public or private sectors, administrations, etc . The main aim of the publication is to trace the implementation of ISO 14001 in Bulgaria by sectors and type of activities. As well this research offers the main reasons to the Bulgarian firms to implement ISO 14001. For reaching the aim, the study made a review of a) Evolution of ISO 14001 and its flexibility, in compliance with changes in the environment and business; b) Research of the firms which implemented ISO 14001 in Bulgaria, c) Content of the activities in the certification cycle. The used methods are according to the research system of the Bulgarian firms which implemented ISO 14001. Finally, some conclusions were drawn about the development of the ISO 14 001 in Bulgaria.

Key words: Bulgaria, certification, ISO 14000, ISO 14001

INTRODUCTION

Worldwide business organization units and government bodies are becoming increasingly aware of the need for environmental management, socially responsible behavior, sustainable growth and development. The implementation of standard ISO 14001 by stakeholders from business, industry, public authorities and non-governmental organizations shows concerns of the organization to reduce global pollution by controlling the impact of the environment with their activities, products or services.

In Bulgaria these processes has started in few of the key sectors, who are basically one of the biggest polluters. That's why is important the used standards in the country, to be achieved by general and comparable practices for environmental management. In addition, governments and regulators are increasingly looking for ISO standards to provide a legal framework to ensure consistency and coordination at national and international level. [3] For many organizations that seek to cooperate with international companies is essential to acquire certification of

compliance with European and international standards. ISO 14001 certification is recommended by regulatory authorities as a way of preventing environmental pollution. This will happen by increasing personal awareness and requirement for communication with the authorities in case of a problem, reducing the risk of liability. ISO 14001 does not define levels of performance in terms of the environment; it can be used by a wide range of organizations, regardless of their level current level. However, organizations are required to commit to compliance with applicable environmental legislation for them and continually improve their management of the environment.

Evolution of ISO 14001 and its flexibility, in compliance with changes in the environment and business

The environment is a topic dating back hundreds of years. In 1300 the UK Parliament adopts laws to curb the smell of the River Thames, which pollutes their airspace [1]. However, the real story of environmental management can be traced to the Industrial Revolution -18th and 19th century. Highlights of the development of ISO 14001 are as

follows:

(a)1973 – The core principles that would eventually influence the ISO 14000 framework were created and an action plan drafted.

(b)The UN Conference “Human Environment” held in Stockholm in 1972, Brundland Commission Report in 1987, the accepted principles concept of Sustainable Development /SD/[6]

(c)Several years later, in response to public support of more than 50 world leaders at the UN Conference on Environment and Development (UNCED) (located in Rio de Janeiro) in 1992 considered several different systems for environmental management, and a variety of national standards for environmental management

(d)In 1993 the European Commission published a regulation for environmental management and audit regulation of environmental management and audit (1836/93 / EC). It includes environmental management and audit scheme (EMAS). Experts from different backgrounds formed a committee charged with developing the ISO 14000 framework

(e)In 1996, the environmental management system ISO 14001 specification is adopted and published. Guidance on assessing the environmental performance labeling of eco-environmental followed the ISO 1400, which is the most successful environmental standard in the world.

(f)The standard was revised in 2004 and is currently being revised again and is expected to be published in 2015.

Since then, the 2004 version has been adopted by thousands of businesses in many countries around the world, including Bulgaria. More improvements are in the pipeline, and the standard is expected to continually evolve in order to help businesses minimise their impact on the natural world as environmental issues [5].

MATERIALS AND METHODS

The purpose of the study was to analyze the ISO standard 14001 in Bulgaria is to identify the need of its implementation in the units.

The main aim was to find out which are the main sectors in Bulgaria, which ISO 14001 could be implemented and the main reason to follow this step.

For reaching the aim, the following tasks were fulfilled:

-To study the implementation of ISO in Bulgaria according a research project [7]. For the current part, it was used the two-dimensional distribution of the data and on that basis it was made an analysis of the sectors capable to implement ISO 14001 and what is the main reason to implement it.

-To find out which the main reason for certification using questionnaire survey for the firms which implemented ISO 14001 in Bulgaria. In this part it is briefly described the content of the activities in the certification cycle in Bulgaria.

-To draw the conclusions, summarize and make recommendations to various companies, according to the results of the survey.

RESULTS AND DISCUSSIONS

Implementation of ISO 14001 in Bulgaria

In 2014 in Bulgaria - are recorded 616 firms implemented ISO 14001[4]. Nearly 50% (49%) of the firms are in “Construction (building) sector”, followed by “Public administration sector and defense; compulsory social security” (7%), “Real estate, renting and business activities (5%)”.

The complete distribution of firms certificate by ISO 14001 is shown in Table 1.

As it is seen from table one, construction sector is most certificated one. The summarized field of activities of the firms there is:

-High construction and associated infrastructure. construction of facilities. Winter maintenance and snow removal on roads and streets.

-High, low and hydro construction (buildings and structures, objects of technical infrastructure-water, sewage, hydraulic, energy, transport, etc.).

-Construction of civil, industrial and infrastructure projects, construction, repair and reconstruction of the transmission, distribution, industrial and building pipelines

for steam, hot water, gas, oil and other combustible fire resistant fluids.

-Performing works on the construction, repair and reconstruction of streets, roads and technical infrastructure objects - water supply, sewage, heating and related facilities.

-Design, construction and repair of roads, buildings, water and sewage systems, earthworks and other construction works. Production, transport and laying of concrete and mortars. Extraction, processing, manufacture and supply of aggregates. Transport services. Production of asphalt mixtures. Production of concrete and concrete products.

-Construction of diaphragm walls, piles, drilling wells, shotcrete and gunite, anchors, grout curtains, hydro, landfill for municipal and industrial solid waste, industrial and civil construction, hydro and tunnel construction; construction of hydropower, irrigation, water supply and sewerage facilities and systems; construction of sewage and drinking water

-Electrification of the rail, mining tram and trolleybus transport

-Construction, security services, landscaping and specialized cleaning and waste disposal.

-Production of aggregates, production and laying of asphalt-concrete mixtures, laying pavement, installation and repair of water and sewage networks and facilities, installation of horizontal and vertical markings, production of seedlings and planting.

-Activities including and associated with the construction and repair of runways, parking stands, paths of airports, highways, roads and streets, as well as provision of related engineering infrastructure. [8, 9]

With equal percentages of distribution (5%) are the sectors: real estate, renting and business services, manufacturing of electrical and optical equipment, trade, repair of motor vehicles, motorcycles and personal belongings and household goods, metallurgy and manufacture of fabricated metal products, machinery and equipment.

In agriculture, hunting and forestry, which is traditional for our country has only 4 companies that have managed to obtain 14001 certificates.

Table 1. Distribution of firms certification by ISO 14001 by sector in 2014

Sectors	%
Construction	49.10
Public administration and defense; compulsory social security	6.71
Real estate, renting and business activities	5.40
Manufacture of electrical and optical equipment	4.75
Repair and maintenance of motor vehicles, motorcycles and personal and household goods	4.75
Basic metals and fabricated metal products, except machinery and equipment	4.58
Manufacture of machinery and equipment without classified in subsector DL	3.93
Manufacture of chemicals, chemical products and fibers	3.27
Manufacture of rubber and plastic	2.62
Manufacture of other non-metallic mineral products	2.62
Manufacture of food products, beverages and tobacco	1.96
Transport, storage and communication	1.96
Manufacturing	1.80
Manufacture of pulp, paper, paperboard and articles of paper and paperboard; publishing and printing	1.15
Other activities, social and personal service	1.15
Yield without energy producing materials	0.98
Manufacture of textiles and textile products; production of clothing	0.82
Supply of electric and thermal energy, gas and water supply	0.82
Agriculture, hunting and forestry	0.65
Vehicle Manufacturing	0.65
Hotels and restaurants	0.49
Extraction of energy resources	0.16
Manufacture of coke, refined petroleum products and nuclear fuel	0.16
financial intermediation	0.16
Health and social activities	0.16

Source: Capital Market SA, own calculations, November 2014 [2].

Their main activities are:

- Construction and maintenance of park and decorative areas, sports fields and playgrounds, playgrounds, irrigation systems, landscaping and more.

-Activities including and associated with design and production of metal, wood and combination of wood and metal structures.

-Landscape architecture. Design, construction and maintenance of green areas and facilities in them. Production of ornamental shrubs,

flowers and trees. Construction works for metal, wood and composite metal and wood structures. Design and construction of playgrounds.

-Gardening, landscaping and maintenance of private and public facilities (parks, gardens, water bodies).

-Construction - Construction work and building repairs.

-Construction, reconstruction and modernization of sewage networks and hydraulic structures.

-Construction of energy and road infrastructure, landslides.

-Landscaping activities.

According to the collected data is seen that there are no in firms operating in agricultural sector which have ISO 14001 certificate.

In Bulgaria, there is operating a plurality of certification companies offering full cycle of activities on implementation of standard 14001.

Table 2. Reason of implementation of ISO 14001 in Bulgaria

Reason	Average	Mode
To reduce costs and save money through targeted approach to resource	2.17	1
To reduce its environmental responsibility	2.75	3
To ensure they meet customer requirements and relevant institutions	2.81	4
To improve the reputation of your company in the eyes of customers, partners and society	3.33	2
To reduce emissions, waste and wastewater	3.92	5

Source: Survey of project NID NI1-4/2014, Own calculations [10]

A sample of firms which has already implemented ISO 14001 was used as a study case to run this research and find out the main reason why it took the decision to implement this standard. The respondents had to mark the answers using a scale from 1 to 5, where 1 is the most important reason and 5 the less important reason.

A number of 50 respondents presented a

feed-back answered back, representing 0.081% of all firms having ISO 14001 in Bulgaria (Table 2).

From the data of table 2, one can see that for the most frequently occurring answer of the reason of implementing ISO 14001 with a highest importance (1) was pointed "To reduce costs and save money through targeted approach to resource", followed by "To improve the reputation of your company in the eyes of customers, partners and society" which has mode 2.

In the same time of calculating average of the given priorities of first place was "To reduce costs and save money through targeted approach to resource" with 2.17 points gained of the scale of importance.

On the second place was "To reduce its environmental responsibility" with rank of 2.75.

The less important reason for implementing ISO 14001 was the average rank of 3.92 and this was "To reduce emissions, waste and wastewater", which as well the mode was the highest possible, 5.

Content and implementation of the activities in the certification cycle in Bulgaria

Very often management system in a small company exists only in the head of the manager. But to ensure the welfare of the organization and resources to be used effectively, it is necessary to have written procedures, instructions, forms or records. This ensures that everyone is doing what they need to achieve goals[1], [10].

ISO 14001 certification is recommended by regulatory authorities as a way of preventing environmental pollution. This will happen by increasing personal awareness and requirement for communication with the authorities in case of a problem, reducing the risk of liability. The procedure described below is a combination [10] of data collected of 5 different certification firms operating in Bulgarian market. Certification activities go through the following stages:

-Preparation for certification - Creation of system documentation management, system implementation, internal audit and management review

-Request for certification - Send Request for Certification - Sending a request is not binding

-Contract - Based on the application, Certification firm submit a proposal for a contract with a specific price conditions. The price can not be shown because it varies a lot based on parameters of the businesses.

-Planning the audit - after signing a contract to plan and coordinate dates for audit

-Audit Stage 1 - Review the documentation of the management system and check the state of preparedness for an audit. The report of this stage can contain findings, requiring removal of deficiencies before an audit of Stage 2

-Audit Stage 2 - Evaluation of the implementation and effectiveness of the management system. The audit gather information and evidence of compliance with all the requirements of the applicable management system standard and the related field of human legal system and other external requirements.

-Decision - Based on the results of the audit deciding certification

-Certification is carried out by etc. "Certification bodies", "certificate authority" bodies or conformity assessment systems management.

-Each certification body is accredited to carry out certification requirements for certain standards in certain sectors for which it is proved that it has jurisdiction.

-Issue and service of ISO Certificate - Issue and service of certificate valid for three years

As well is possible some additional audits during the 3 years of the duration of the certificate, as pre-certification, transferring of the certificate, and etc.

Each organization which decides to be certificated by 14001 standards should prepare many documents related to the environment. These documents shall be submitted to the certifying company and after checks list can be issued the certificate procedure. On the Bulgarian Market are operating 52 certification firms. Most of them till now(November 2014) are having between 1- 4 firms for which they implemented ISO 14001 [11].

The leader place of the consultants firm is having successful certification cycle of 24 firms. Most common case is (106) the firm or organization to certificate the unit without using consultants. This is the case of 17% of all certificated units.

CONCLUSIONS

ISO 14001 is an internationally accepted standard that describes how most effectively to manage a business on the environment in which it operates.

It is designed to help businesses remain economically successful, despite their environmental responsibilities.

The system ISO 14001 provides the framework to achieve increasingly high customer expectations of corporate responsibility, as well as legal and regulatory requirements.

Sectors in which certificated companies are those that generate most major environmental problems, such as construction, road construction, extraction and distribution of petroleum products, metal processing and others.

Certified Systems of environmental management to ISO 14001 minimize the risk of environmental incidents. This creates conditions for lower insurance premiums, providing greater investor confidence, stable presence in the European and world market. Mostly large companies are certified by ISO 14001 because at this stage the procedure is quite expensive and connected with a lot of documents. As well the certificate must be renewed every three years.

In Bulgaria by ISO 14001 are certificated 611 firms, of which 50% in construction sector. The agricultural sector is on one of the last place and it has only 4 representations.

The most important reason for implementing ISO 14001 of Bulgarian firms is connected with possibility for reducing costs and save money through targeted approach to resource. The procedure is synchronized with the legislation in the country.

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