CHAPTER 5

THE ECOLABELLING TYPE I IN BRAZIL'S SUSTAINABLE PUBLIC PROCUREMENT

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The production and consumption patterns in global society derive from industrial and technological development characterized by the supply of goods and services on a large scale. Modern Western societies' habits contribute to the excess consumption of unnecessary and often superfluous goods and the production of waste (CORTEZ; ORTIGOZA, 2007). The level of exploitation of natural resources to obtain raw materials is at a higher level than the capacity to support ecosystems that are proven by the phenomenon of global warming, the pollution of seas, rivers and springs, and the extinction of species of fauna and flora (VEIGA, 2005).

According to Stern (2007), the potential and irreversible impacts of global warming on ecosystems, societies and economies are beginning to be known and measured. Stopping the rising global temperatures requires an efficient transition towards a low-carbon economy, which can make climate issues a complex problem for humanity to solve. Since the 1990s, there has been a shift in the focus of discussions concerning environmental problems. Questions about the impacts of consumption patterns have taken place about approaches considered only problems related to productive activity (PORTILHO; RUSSO, 2008).

In this context, expressions such as sustainable consumption, conscious consumption, or responsible consumption have emerged to denominate the use of goods and services that meet basic needs, improve quality of life and the production of lower impacts concerning the environment. The understanding of sustainable consumption seems to materialize the very concept of sustainable development contained in the Brundtland report (PNUMA, 2001). Thus, it becomes necessary that the satisfaction of modern society's needs be in line with the rational use of natural resources to contribute to the change of production and consumption patterns in force to more responsible patterns.

On the international scene, Agenda 2030, adopted by the United Nations in 2015, proposes the adoption of 17 sustainable development goals (SDGs), which are subdivided into 169 corresponding goals. Sustainable development goal No. 12 stands out, proposing sustainable production and consumption by promoting sustainable public procurement (goal 12.7) and following national policies and priorities. The United Nations recognizes that public procurement is essential in innovation and transition to a green economy since the need to meet sustainability criteria incorporated into the public bidding edicts drives the market towards the adopting innovation aimed at sustainability.

For the United Nations, public procurement creates synergy between innovation, economic development and environmental protection. Moreover, governments, in their role as leading consumers of sustainability, encourage change in society's production and consumption patterns by demanding environmentally responsible products and services. Thus, if initially the figure of the consumer was associated with the individual, the expansion of the theme resulted in the perception that public and private institutions are also expressive consumers of goods and services and can present more significant levels of consumption than individuals (PORTILHO; RUSSO, 2008).

In Brazil, according to the Ministério do Planejamento, Orçamento e Gestão (MPOG) (BRAZIL, 2010), government purchases move about 10 to 15% of the country gross domestic product. These values show the importance of government actors as consumers of products and services. They have stimulated countries to elaborate guides and action plans to implement environmental management mechanisms in public agencies.

In this context, sustainable public procurement (SPC) or sustainable bids is a relevant environmental management tool for government agencies. With public agencies as consumers, the SPC can stimulate the green market and the circular economy, leading companies to adopt sustainable practices in their production

processes, such as sustainable design, waste reduction, material reuse, recycling and the use of ecolabels.

In Brazil, several actions have been developed in order to constitute a Public Policy for SPC. Examples are the environmental agenda in A3P Public Administration. A specific thematic axis on sustainable bidding was inserted and the elaboration of sustainable public purchasing guides by the MPOG and the Ministério do Meio Ambiente (MMA). In 2007, the *Plano de ação para produção e consumo sustentáveis* (PPCS) was prepared, aligned with the Marrakech Process actions, to foster the adoption of sustainable production and consumption patterns in Brazil.

In 2010, Normative Instruction No. 1 was prepared, which provided the criteria of environmental sustainability in acquiring goods, hiring of services, or works by direct public administration, municipal and foundation. In 2012, decree No. 7,746 was published, to regulate art. 3 of law No. 8,666 of June 21, 1993, to establish criteria, practices and guidelines for the promoting national sustainable development in hiring by the federal public administration and establishing the Comissão Interministerial de Sustentabilidade na Administração Pública (CISAP).

Besides these actions, the federal government, through MPOG, has developed a computer-based purchasing system with a catalog of sustainable products that can be used by the various agencies as a reference for the inclusion of sustainability criteria in the specifications of goods and services in bidding notices.

Despite the relevance and the positive political, economic and social repercussions of these actions, there is still a necessity to improve the process of sustainable public procurement in Brazil to effectively be an instrument to induce changes in production and consumption patterns in the country.

Two priorities must be met to strengthen the sustainability variable in the national sustainable public procurement process life cycle. One is the creation of sustainability criteria for the acquisition of goods and contracting of services. The other is the improvement of the mechanism for verifying these criteria by the purchasing or contracting public agencies.

In the sustainable public procurement process, most of the criteria classified as sustainability criteria concern the product technical specifications. Public agencies verification is done mainly through self-declarations from manufacturers/suppliers that ensure that their products and services are sustainable and meet the required sustainability criteria.

THE HARD CHOICE OF SUSTAINABILITY IN THE PROCESS OF SUSTAINABLE PUBLIC PROCUREMENTS

Choosing the most sustainable product or service than similar ones on the market is one of the most critical steps in conducting a sustainable bidding process, given the proliferation of definitions of existing sustainable products. Some products are considered sustainable when they generate less waste in their production process or are recyclable or last longer. Others, when they do not consist of harmful or toxic substances to human health or when their production process is less energy-intensive, water-intensive or emits fewer greenhouse gases.

To decide which product is environmentally preferable, researchers and experts recommend comparing the environmental impacts of products by evaluating their life cycles. A sustainable product presents the best environmental performance throughout its life cycle with quality function and level of satisfaction equal or better, if compared with a standard product (BIDERMAN et al., 2008).

In practice, it is not always easy to find appropriate sustainability criteria for the purchase of a product or service; usually, they are not related to these products or services environmental performance. Moreover, the same server that works with sustainable public procurement has no practical training on the subject. One of the most common challenges for implementing sustainable product bidding is the lack of information and consumer experience (public agencies) to compare specific characteristics of a product.

In some cases, the consumer is overloaded with information about the products sustainability by the manufacturers themselves. This fact creates the necessity of checking the veracity of this information by the purchasing agency. There are practical tools that help overcome these obstacles. That is used in countries with practical and sustainable public procurement policies, such as the United States of America, England, Canada, South Korea, Japan and Germany. Such instruments are based on the life-cycle assessment (LCA) methodology, a holistic concept to evaluate a product or service environmental performance. The LCA considers the product environmental impact in its life cycle, that is, in all its stages, from the extraction of raw materials to the final disposal of the product to minimize negative impacts on the environment.

It should be noted that these instruments take into account the principles of the circular economy, which emerged from an industrial ecology model based on the idea of closed cycles that were used by environmental policies in Germany and Sweden in the early 1970s (YUAN et al., 2006). Circular economy is an

alternative to the linear production system to transform consumer goods, which would be discarded as waste, resources for other sectors of the economy, closing cycles in the industrial ecosystem and minimizing waste production. The innovative process seeks to replace linear production with resources that can be reused, repaired, remanufactured (STAHEL, 2016).

SOME CONSIDERATIONS ABOUT LIFE-CYCLE ASSESSMENT (LCA)

The definition of life-cycle assessment (LCA), according to ISO/TC 207, is "the compilation and evaluation of the inputs, outputs, and potential environmental impacts of a product system throughout its life cycle." The LCA is a tool developed to assist the continuous search for environmental performance. Unlike other techniques commonly used in environmental assessments, the LCA has a comparative approach and presents some specific characteristics. It is considered as a starting point for ecolabelling programs (SETAC, 2002).

According to ISO 14040, the LCA addresses all potential environmental aspects and impacts throughout the product life cycle, including extraction and acquisition of raw materials, and production, use, recycling and finally final disposal. The standards developed by the International Organization for Standardization (ISO) on LCA harmonize the procedures adopted in initiatives taken in various countries of the world by research institutes and companies interested in demonstrating the environmental performance and acceptance of products in the market.

Considering the different stages of the product life cycle, from obtaining the raw material to the final disposal of the product, makes the LCA an efficient tool for environmental improvement. The reason is the consideration of environmental impacts from one stage of the product life cycle to another or from one medium to another, without there being a liquid environmental gain (IPEA, 2011).

By implementing the life cycle approach in establishing environmental label criteria, the use of LCA can also present some difficulties and limitations. The great extent of the studies, the high costs involved, the difficulty in obtaining data that are not always available, and the long term for achieving results. The solution to the problem lies in the principle of considering aspects of the life cycle.

International Organization for Standardization (ISO) recommends in standard 14024 that specific environmental criteria consider the product life cycle,

without the need to conduct a complete evaluation of this cycle. It is done by assessing aspects of the product life cycle, identifying critical phases about the potential impacts that will be the subject of further studies.

Such an approach should include a meaningful assessment of the impacts to support selecting those to be used in defining the criteria. Stakeholder involvement in the requirements definition process is essential to ensure their legitimacy and adequacy. One of the ways used for this purpose is to set up committees with representatives of interested sectors to conduct the work.

An LCA conduct requires a considerable investment of time and resources, but both private organizations and public bodies use this tool to support decision-making. It can be used, for example, in the development of public policies for ecolabelling, which are essential market instruments in the country's sustainable public procurement process.

ENVIRONMENTAL LABELLING ASPECTS

The increase in society's awareness of environmental issues has had significant effects on consumer markets for products and services. These effects have presented themselves as growing demand for information on the environmental aspects involved in the production processes, which significantly influences the consumers' purchasing decision (BRAZIL, 2002).

This scenario has given rise to hundreds of initiatives to disseminate information on the socio-environmental sustainability of production processes and the use of various products and services. This information is usually unbelievable.

Many of these initiatives can be classified as ecolabelling. No agreed definition describes their basic concepts, nor a single discipline that thoroughly explains them. It is an interdisciplinary subject and can be understood as a label that identifies a product or service overall environmental preference within a specific product/service category based on life cycle considerations.

According to IPEA (2011), ecolabelling is the practice of informing consumers about a product characterized by better environmental performance than similar products. It consists of giving a seal or label to a product or service to inform its economic and social environmental aspects.

It is an economic instrument and a communication tool. It seeks to disseminate information that positively changes production and consumption patterns, increasing consumers and producers' awareness about the necessity of using natural resources more responsibly. It seeks, based on accurate and verifiable infor-

mation about the environmental aspects of products and services, to encourage the demand for those products that cause less impact on the environment.

Other expressions are also used to designate ecolabel, such as green seal, environmental label and environmental statement (IPEA, 2011).

Often, labelling and certification are also used as synonyms. However, environmental labelling (ecolabelling) generally relates to the characteristics of the product. It is aimed at final consumers, while environmental certification (ecocertification) is related to production methods and processes. It is mainly directed at resource-using industries, seeking to attest to one or more attributes of the production process (IPEA, 2011).

Due to the proliferation of many ecolabels and seals in global markets and the importance of establishing standards and rules for their proper use, ISO has developed standards for ecolabelling and classified the various types of ecolabelling into three main types: type I (ISO 14024), type II (ISO 14021) and type III (ISO 14025) (BRAZIL, 2002).

Ecolabel type I is conferred by third-party programs (not the manufacturer or the supplier). It is based on multiple criteria, is voluntary and considers aspects of the product life cycle. It is also known as a green label. Ecolabel type II corresponds to the informative self-declarations made by the manufacturers or suppliers themselves. Ecolabel type III is also conferred by voluntary third-party programs and provides extensive and quantified information based on a complete LCA. It is still under development, mainly in the academic sector (BRAZIL, 2002).

There are other types of ecolabels that are quite specific, but which have not been regulated by ISO. An example is organic agriculture certification, which certifies that certain agricultural products, such as food or textile products, come from productions that do not use chemical substances. Another example is the neutral stamps, which briefly inform the environmental characteristics to guide the consumer. It is the Procel label of energy conservation, which allows the consumer to choose a product with lower energy consumption compared to others of the same category.

These alternative programs generally focus on a single sector or address only one environmental problem and do not consider the product life cycle in their applications. They generally focus on just one criterion.

In a typical type I ecolabelling program, product categories and criteria are determined by an independent organization with a complimentary technical

consulting group. From the moment a category is chosen, some form of LCA is conducted. Companies that choose to submit their products/services to the type I ecolabelling program to obtain the corresponding label (logo) fill out a contract and present their products for conformity testing and verification done by a third-party organization (auditing).

Suppose the products are approved and fulfil the defined criteria. In that case, companies pay licensing fees to use the ecolabeling program logo for a certain period, with the need for a new evaluation (auditing) for renewal. The ecolabel is restricted to the approved product and the industrial site where it is manufactured and monitored by the management agency.

The ecolabel type I is considered the most appropriate to compose the sustainability system verification in sustainable public procurement. The idea is to ensure the necessary impartiality and credibility.

It is voluntary and considers aspects of the product life cycle. It does not consider only the technical specifications of the product. However, it evaluates its entire production process, besides being conferred by a third-party body that does not represent the producer, the supplier, or any other party interested in the commercial aspects.

TYPE I ECOLABELLING AND SUSTAINABILITY VERIFICATION IN SUSTAINABLE PUBLIC PROCUREMENT

Sustainable public procurement is a relevant instrument to contribute to the reorganization of the economy with new paradigms. In Brazil, they are inserted in a context of national agendas that guide actions and policies for sustainable development. From this perspective, public hiring represents the adjustment of hiring to what is called sustainable consumption.

According to Biderman et al. (2008), sustainable bidding is a solution to integrating environmental and social considerations into all stages of the purchasing and contracting process of public agents (governments) to reduce impacts on human health and the environment human rights. These bids objective is, by legal force, to ensure free competition and obtain the best product/service with the most advantageous proposal.

The most advantageous proposal for the public administration should take into account the lowest price and the cost as a whole, considering the preservation of the environment and the social welfare of the populations. According to

Costa (2011), the most advantageous proposal is not, nor should it be, interpreted as synonymous with lower prices. Furthermore, he notes that even in cases where a sustainable product has a higher price, many times, the corresponding maintenance and disposal costs are lower.

The introduction of the variable sustainability considering the economic, social and environmental dimensions in the public procurement process increases its complexity. Besides the concern with financial expenses, one must consider the impacts that hiring can cause to society's environment.

Public resources must be broadly and responsibly considered. The public manager's great responsibility is to maintain, besides free competition, the lowest financial, social and environmental cost to ensure that the most advantageous proposal is more advantageous for the whole society, which is the holder of the public good.

Even facing significant contributions resulting from the change promoted by law 12,349/2010, within the Brazilian federal government, the status of the first regulatory framework for the insertion of sustainability criteria in public contracts is attributed to Normative Instruction (NI) No. 1, 2010. Through the dispatch of this IN, the MPOG established instructions to be observed in the acquisition of goods and contracting services or works by the organs of direct federal, autarchic and foundational public administration.

With the publication of NI No. 1, sustainable public procurement expanded the concept of more advantageous procurement in public bids. They began to consider the purchase of products less harmful to the environment and not only those at lower prices (IPEA, 2011).

It was also recommended by the same standard the inclusion of sustainability criteria in sustainable public contracting. However, there is still no credible, practical and dynamic system for developing criteria and verifying the required sustainability. In many developed countries such as South Korea, Japan, the United States of America and Germany, this verification is done through type I environmental labelling.

It is also known that type I environmental labelling programs have sustainability criteria created for various categories of products/services that consider aspects of the life cycle of these products/services. A complete LCA of the life cycle is not made because it is a costly process that demands long-term execution, and whose methodology is still being perfected globally.

Following the instructions of ISO 14024, type I ecolabelling programs make LCA based on aspects of the life cycle of products/services. It means they do not assess the entire life cycle but identify the critical points in this cycle. The probability of impacts on the environment and human health is significant. The criteria are then created for these critical points to be assessed through the audit.

The relevance of these sustainability criteria created may be considered by the public managers responsible for sustainable public procurement and may be transcribed to the terms of reference of these bids. Thus, they may be evaluated by independent auditing of the type I ecolabelling program included in the public process. This fact brings more partiality and credibility to the public process. In countries where this practice is still not used and to promote type I ecolabelling in sustainable public procurement, it is not required that the product tendered has the type I environmental label. Obtaining the label usually requires fulfilling a reasonable number of criteria, making the process more costly for the producer/supplier. The requirement is that the tendered product fulfils one or two criteria considered the most important and represents the significant impacts on this product life cycle environment or human health.

In Brazil, this process could be adopted. The terms of reference for public procurement could merge sustainability criteria with auditing requirements and sustainability criteria supported by self-declaration from the producer/supplier. In this way, significant impacts of the products/services production processes could be verified through auditing. It is important to emphasize that such audit must necessarily be done by a body accredited by the Instituto Nacional de Metrologia, Qualidade e Tecnologia (Inmetro), which is the official accreditation body of the country through the Coordenação Geral de Acreditação (CGCRE).

The idea is to bring credibility to the sustainable public procurement process and guarantee that capable bodies would be responsible for the auditing.

Taking into consideration that the process of verifying the tendered product sustainability (auditing) is onerous, one can discuss the creation of a financing mechanism or subsidy for micro and small companies. The objective is to promote and encourage the search for environmental improvement of their production processes and provide fairer competition with larger-sized companies and higher economic turnover. The Serviço Brasileiro de Apoio as Micro e Pequenas Empresas (Sebrae) could discuss alternatives for micro and small enterprises, which already has financing lines for this type of company, and by the Banco Nacional de Desenvolvimento Econômico e Social (BNDES) for the viability of equal credit.

The elaboration of environmental criteria with sustainability verification systems by third party organizations and the creation of financing mechanisms for micro and small companies can constitute actions that effectively induce the improvement of the sustainable public procurement process in Brazil. Furthermore, with these initiatives, the Brazilian government can strengthen its leadership role as a sustainable consumer and significantly change current production and consumption patterns to standards considered more responsible.

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