

By Caroline Martin
Specially for *O Papel*



Anderi: The Brazilian Life Cycle Association is heading a move to accelerate the creation of the Environmental Labeling Program, in Brazil, which will be responsible for setting the general rules and for the specific rules for each segment

Life Cycle Assessment is strengthened as a methodology that leads to more sustainable practices

The time when neglecting and hiding the manufacturing process related to products development was a common practice among players from different industrial segments is getting increasingly distant. Amid strict environmental standards and a growing social appeal, the companies that aim to stand out in the marketplace are conscious of the importance of a sustainable behavior.

To embrace change for sustainability, in its widest sense, measuring their environmental footprint performance - from the beginning of the chain until the end of the consumption cycle - becomes an indispensable aspect. In such a warmed scene, with constant demands, Life Cycle Assessment (LCA) stands out, a tool created with the purpose of supporting the calculations performance and the comparison of relevant results related to environmental impacts of production processes.

In the interview granted to *O Papel*, Gil Anderi, a professor in the Chemical Engineering Department of São Paulo University (USP) and a member of the Brazilian Life Cycle Association (ABCV), talks about the details of the methodology that is gaining momentum in recent years.

O Papel – Is Life Cycle Assessment (LCA) an international tool? How did the initiative of developing such methodology emerge in Brazil?

Gil Anderi – Yes, it is an international methodology and quite new in the world. The first international work similar to LCA was carried out in 1965, in the United States. Three materials for Coke package were compared (metal, plastic and glass) in order to define the most advantageous in different aspects. In Brazil, references show that, in

1993, the Environmental Standardization Support Group (GANA) was created, which brought together large companies concerned with the fact that the Brazilian Association of Technical Standards (ABNT) did not have a specific definition regarding the international standards that were being written at the time. So, such players have organized this group in order to take care of the environmental standards. Five years later, a subcommittee formed by some representatives of those companies became the Brazilian Committee for Environmental Management (CB 38), in ABNT. However, the first significant Brazilian LCA work was a report prepared by the Food Technology Institute (ITAL). In its Food Packaging Technology Center, ITAL conducted a very serious and important work, studying 14 different materials for food packaging. This work can be considered as the emergence of LCA in Brazil.

O Papel – From this initial work, how is this tool becoming more popular among many Brazilian industry segments?

Anderi – Life Cycle Assessment (LCA), encouraged in 2001 by CB 38 superintendent, Haroldo Matos, has played an important role in disseminating the methodology. Ahead of the association, Haroldo participates of the annual meetings of ISO standards. In one of those meetings, still in 2001, he noticed the beginning of international discussions about ISO 14025 standard, a standard from ISO 14020 series, establishing three categories for environmental labeling: categories I, II and III. In 2006, this standard was issued by ISO and, at that time (2001), some Asian countries were already preparing to qualify and

run LCA studies, which offer the required support for accreditation in labels of categories I and III. By identifying such development need and maturation of LCA, Haroldo brought this concern into Brazil: we also needed to qualify to fit into the environmental labeling categories. The Brazilian Life Cycle Association (ABCV) emerged in such context, in the search for meeting the standards with the support of LCA study.

O Papel – Do you believe that LCA is even more important nowadays, when sustainable practices are more and more necessary and required?

Anderi – Yes. I see this tool as one of the most important in current environmental management. The watchword, today, is *sustainability*. Many definitions fit in there, but the concept adopted by the association is quite simple: we must sustain the natural resources, since they are consumed to meet the desires and needs of human beings. The idea behind sustainability is, therefore, to consume these natural resources without risking to exhaust them. If such resources are used in the manufacturing of many different products, we must consume the respective products thinking of ways to not deplete the natural resources. This is our opinion about the essence of sustainability. We also know that sustainability is based on three pillars: environmental, economic and social. The environmental, for us, means exactly the consumption of the natural resource in its widest concept. This consumption starts at the moment the natural resources are extracted and continues through the whole productive chain to manufacture the products. And the process does not end here. Throughout consumption, natural resources continue to be used, such as the use of energy and transportation, among others. All this path of natural resources must meet the economic and social pillars. Sustainability, therefore, is a systemic concept which rules current life. It is not without reason that the global indicators are no longer restricted to GDP. Sustainability indicators exist today, and they are equally important to evaluate the performance of a country. The management of economic organizations has to take sustainability into account and, in order to manage this item, it is mandatory to measure. And, to perform such measurement, the ruler is LCA.

O Papel – How does the tool work in practice?

Anderi – There are two big licensors of the software that runs the LCA study, and they adopt different formats. It's still an international commercial war, which also resonates in Brazil, but here we can already identify a trend towards one of these software. As a member of the Brazilian Life Cycle Association, I reinforce that the Government should not lean to one side. The ideal approach is to bet on ways of making the tool more consistent, combining one software to another. And this is a quite relevant point about LCA, since, these days, we can see numerous sustainability indicators being created, for companies, products or geographic regions. The big problem related to all these different indicators is the fact that each one meets specific interests, hindering standardization and a consequent comparison of results. For this reason, the association has been working in the defense that it is necessary to create rules based on ISO 14025 standard. This standard is quite complete, as it establishes all the conditions that allow the LCA studies to compare the results. In practice, the standard establishes what

must be done, and also indicates sector groups. If the pulp and paper sector wishes to be granted with label category III for its products, for instance, it must run the LCA study in accordance with the described rules. So, all producers in the sector would use the same method and the results could be compared. This is the practical application of LCA and it is being already adopted by some Brazilian players.

O Papel – Which are the challenges related to such dissemination of the practical use of LCA?

Anderi – The Brazilian Life Cycle Association is heading a movement to accelerate the creation of the Environmental Labeling Program in Brazil. This program will be responsible for the definition of both the general and the specific rules for each segment, counting on the participation of all sectors involved. Namely, the methodology already exists and is being adopted by some Brazilian companies. However, in order to expand the use, it is still necessary to centralize information and to address some issues that I call "methodological uncertainties". These are issues that arise when the method is being developed and require the executor to make a subjective decision. Each time we take a subjective decision we weakens the method, as while a performer adopts one decision that he considers the best choice, another executor may choose a different option, characterizing points of methodological uncertainties. What happens at the moment is: the standard establishes what must be done, but, within it, it is necessary to incentive the creation of sector groups.

O Papel – Do you believe that this tool is even more important for some specific industry segments, such as the pulp and paper sector, which, despite acting sustainably, still faces a wrong view by most consumers? Can LCA help to address this flawed aspect of communication?

Anderi – This is one more subject being thoroughly discussed by a group in ABNT, since the main standard (ISO 14044) establishing the rules for conducting LCA studies states that studies for a public external to the organization must undergo a critical review, when a panel of specialists reviews the work, just like an audit. This is fundamental, because it does not help to disseminate environmental information of a product if the public does not understand such information. The way of presenting the results of the LCA study must be appropriate to the public. Communication is extremely important and must be fully understandable to the public. Done this way, the tool, for sure, has the potential to bring customers and manufacturers together.

O Papel – The interest for tools like LCA is growing among the big players. Is it possible to identify already such interest among medium size and small companies? Is it accessible to these players too?

Anderi – The interest among players of small and medium size is still shy. However, I believe that the large organizations will motivate some of these small players. Making LCA more affordable is very important in this process, as it still is a high cost study. When the small and medium size players, motivated by the most diverse market issues and by the large players, become interested, there will be ways to make the study more affordable. ABCV is aware of this scenario. ■