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TITLE: BENCHMARKING ACTIVITIES AND COMMITMENT WITHIN SUSTAINABILITY – EXAMPLE IN THE FOOD INDUSTRY

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Abstract

This Master thesis is about benchmarking sustainability, using as example the food sector. The aim of the project is to create a feasible and practical methodology for companies.
To do so, firstly, an overviewed on six different tools is provided in order to show how they are not able to provide a feasible, comprehensive, and easy-to-use tool. The analysed tools are: the Dow Jones Sustainable Indexes, the Global 100 Most Sustainable Companies, and others developed by Graafland et al., Yakovieva et al., the Green Research, and the Centre for Sustainability and Excellence. Then, after that the critical view on those benchmark tools has been presented, the new methodology for benchmarking is introduced – trying to cover those lacks. Such methodology is characterized by the adoption of Global Reporting Initiative's KPIs, which facilitate the data collection process, and make enable it to be comprehensive and simple to use, and finally, together with the initiatives within sustainability, also the commitments and goals are taken into consideration.

Summary

1. Introduction

Nowadays there is an increasing demand for transparency on companies' activities and commitment. In fact the disclosure of information is now considered as an unavoidable part of sustainability. (Gunther, 2010)
To guarantee such disclosure more and more companies are increasingly reporting on their not financial activities. But such practice is not the end of business' process on the sustainability path, is just the beginning. Indeed, afterwards, companies should be able to measure the outcomes of their initiatives, in order to make continuous improvements. One of the most common way of doing it is benchmarking.
However, benchmarking sustainability within business is not an easy task, indeed there is a growing numbers of tools offered by different consultancies which provides different views, and rankings, on companies' actions within CSR. An example of such broad and differentiated panorama on benchmarking is proved by the study *Rate the Raters* of Sustainability, in which 108 different tools for benchmarking and measuring are mentioned. (SustainAbility, 2010 a)
Despite this high variety of tools present nowadays, for a company is not always possible to understand according to which parameters it has been benchmarked, or how it can improve. Thus many are trying to find their own way to benchmark themselves against competitors of the same sector, and to do this they need a new methodology – since there is none on the market which can be useful for this purpose.

1.1 Sustainability and CSR into business

The definition of sustainability, and, in relation to business, of Corporate Social Responsibility (CSR), has significantly evolved since the 1950s up to now. The first milestone is usually recognized as the book written by Howard Bowen in 1953, *Social Responsibility of the Businessman*. Then, starting from the social movement of the 1960s and 1970s, the concept of social responsibility issues started to be taken into consideration also by institutions – particularly environment, working conditions, and customers interests. During the 1980s CSR concept continued to evolve, and at the same time it started to be seen as something that can also be profitable for companies. Lastly, in the 1990s CSR began to be a recognize concept among business. (Carroll, 1999)
From this slow process of evolution, in the last years the CSR theory has accomplished a further step, with an explosion of attention and a high diversification and flourishing of different theories. Indeed the panorama of CSR's theory is much more complex than before, and different main streams may be identified. According to Elisabet Garriga and Domènec Melé, it is possible to distinguish 4 different branches on CSR theories scenario.

The four group of theories are:

1. **Instrumental theories:** where the company is seen as an instrument to create social wealth, and its social activities are a way to achieve economic results.
2. **Political theories:** according to which corporation should act responsively towards

society, using their influential power inside the political sphere.

3. **Integrative theories:** where the company is focused on the social demand coming from its customers.
4. **Ethical theories:** for which corporation should be responsible towards society.

The fourth group of theories is the one that better represents the vision that characterizes this study. This vision is based and differentiated on four different principles, or approaches, which drive business towards responsibility. The first of them is the *normative stakeholder theory*, where the company has to be responsible towards all its stakeholders, and not just its shareholders; the *universal rights theory*, in which the human rights (based on the UN Universal Declaration of Human Rights adopted of 1948) are the base for approaching CSR; then the *sustainable development theory*, which, according to the World Business Council for Sustainable Development "requires the integration of social, environmental, and economic considerations to make balanced judgments for the long term"; and lastly, the *common good approach*, in which companies are asked to contribute to the common good of society, since, as social group, they are an effective part of it. (E. Garriga and D. Melé, 2004)

The inclusion of CSR practices into business is not an easy task, and there are now different documents worldwide which can help an organization to do so. Probably one of the most appreciated and recognized is the one year old ISO guidance on it, the 26000. Apart from all the useful information that provides in order to embedding social responsibility into the daily management and the organizational governance of a company, I want to refer to it because of the potential benefits that such inclusion can bring. According to the standard the possible advantages that may come from the inclusion of social responsibility into daily operations may be: gaining competitive advantages; increasing reputation amongst investors, owners, donors, sponsor, and the financial community; capacity of attract and retain workers, customers, clients and users; the maintenance of employees' morale, commitment and productivity; and improve the relationship with other companies, government, media, suppliers peers, customers, and the community in which it operates.

(International Organization for Standardizaton, 2010),

1.2 Ratings and measurements

After the implementation of sustainable practices, the need of measure sustainability is increasingly pressing companies, since this is the most effective way to quantify the initiatives undertaken, evaluate them, and, if possible, improve them.

How it has been pointed out by Suzanne Fallender, corporate responsibility officer at Intel, when interviewed for the Businessweek, customers and investors are now increasingly demanding for information regarding the nonfinancial performances of companies, and the flourishing of different measuring systems, that is characterizing these last years, is not helping the customers to clarify the company's activities within sustainability. (Weise, 2011)

To give an idea of the amount of ratings for sustainability which exists nowadays it is pertinent to mention the four steps study (constituted by four different documents), undertaken by the consultancy SustainAbility – named *Rate the Raters*. This study is aimed to give a comprehensive picture on the constantly growing reality of ratings, and, finally, suggesting how it should develop. The project is characterized by four different stages, in which SustainAbility is analysing

a broad range of different systems to measure sustainability (108), and is giving quite an interesting picture on the situation and on how those metrics are designed.
The first document is reporting on the actual general situation of measuring sustainability: how the ranking systems have increased from 21 in 2000 to 108 in 2010 (more than a third of those emerged in the last 5 years), how they are often based on corporate transparency and rarely transparent themselves, how rating can create a positive competition amongst companies, rising the debate on what are positive performances. But it is also writing about the negative aspects, such as: the existence of too many ratings which measure the same thing in different ways, how sustainability performances and disclosure are often confused, the adoption of proper comparisons, and on the fact that not always the three pillars of sustainability are included (usually economy is omitted). (SustainAbility, 2010 a)

1.3 Benchmarking

The benchmarking process has always been part of business, as a method that is comparing a practice to standards or other practices. What it is characterizing this methodology is the process, which favourite the continuous improvement, and implementing, of management system – included sustainable ones. Those steps are usually summarized as: learning, sharing information, and adapting, to improve the overall performances of the process in analysis (Pojasek, 2010). As it is possible to imagine, benchmarking is gaining considerable attention from the industry sector as a tool for continuous improvement along the value chain, and as well to gain competitive advantages; furthermore it is also viewed as a way to increase transparency of companies' activities (Graafland et al., 2004). In fact it is now considered as an important methodology for the evaluation process of the organization of products, services and processes, since is pushing companies towards the creation and the introduction of best practices (or even imitating them), and, thus, the improvement of the sustainable program. (Natalia Yakovieva, 2009)
Benchmarking can be done on different levels and with different approaches. For the purposes of this paper, my definition of benchmarking is considering it as the process of comparing the performances and stimulating firms to take a further step towards sustainability.
As all the tools, also benchmarking is characterized by some weak and strong points. Hereafter I try to present a comprehensive vision on the positive and negative arguments that affect benchmarking.

Advantages

Some of the recognized positive characteristics of benchmarking sustainability are:

- **Transparency:** the position of the company within the ranking is due to the amount, and quality, of information that the firm is disclosing – easy to check.
- **Accountability:** it is easier for the stakeholders to recognize the improvement of the company during time, and for a company to recognize its weakness.
- **Comparison:** it is useful at different level; indeed it allows customers to see quantified the sustainable performances of the company, while the firm can compare itself during time and processes, and in relation to others – stimulating therefore the improvements.
- **Simplicity:** if quantified into numbers, a quick look is able to provide an idea of the sustainable performances – but methodologies should be clear.

- **Systematic approach:** can avoid unbalanced views on the CSR practices.
- **Objective view:** when it is presented by an external and independent actor.
- **Target:** the benchmarking of their performances helps companies to set appropriate targets and achieve them.
- **Regularly compliance:** the CSR framework helps to comply to upcoming legislation.
- **Increase value:** the sustainability activities seem to increase the companies' value – particularly to investors.
  (Graafland et al., 2004) (Better Buildings Partnership, 2010)

Limits and philosophical problems

However, benchmarking is not a measurement that is free from problems, indeed, there are many issues related to it which have been pointed out in the last years, such as:

- The assumption of **monism**: indeed, when creating a ranking, most of the time it is made by a cardinal ranking of multiple values and actions (which are pluralistic for nature) – for instance qualitative data are turned into quantitative.
- The assumption of **commensurability** of different **values**: the comparability of different values (e.g. economical and social) has to be clear set, in order to allow a proper benchmark of those.
- The disregard of **intentions**: which can reveal if the company is taking action for moral reason or not.
- The subjectivity of **valuation**: the value of every action can be different according to the stakeholder which is used as reference, or to evaluate.
- Care **ethical point of view**: the notion that the company is more responsible for some of its stakeholders than for others.
- The assumed **context** independence of a **moral action**: in some circumstances the moral guilt can be alleviated.
- The effective **control** of the company: there are situation on which the company just have a partial control, or even none (e.g. supply chain).
- The problem of **communication**: the communication of CSR activities may be seen as a way to improve the reputation of the company, while others would prefer to communicate just to accomplish to verification duty, or some may even decide to do not communicate them at all.
  (Graafland et al., 2004)

Benchmarking is an important way of analysing and increasing sustainability, however to report properly on social responsibility, a clear guidance is needed. For this purpose the most adopted guidelines worldwide on sustainability is the GRI Reporting Framework.

1.4 GRI Reporting Framework

The Global Reporting Initiative (GRI) is a multi-stakeholder (more than 600) network-based organization, which is headquartered in Amsterdam, the Netherlands. The Sustainability Reporting Guidelines has been released for the first time in 2006, and in 2011 it was already at its third generation with the **G3.1 Guidelines** update – a G4 Guidelines will be released in May 2013.

(Global Reporting Initiative - GRI, b) The GRI is providing business with a detailed document, the Sustainability Reporting Framework, a guidance on how to report on sustainability. The **Sustainability Reporting Framework** – which includes the *Reporting Guidelines*, the *Sector Guidelines* and others helpful documents – enables organizations of all size to report their activities about economic, environmental, social, and governance with great transparency and method. (Global Reporting Initiative - GRI, a) What is important to underline is that the GRI's framework does not evaluate the sustainable performances of companies, but it just express the level of compliance to its guidance, through the A, B, and C classes, which are self-declared by the company and eventually assure by a third party (in this case a "+" follows the class).
The aim of a company sustainability report is to communicate its initiatives within sustainability, using comparable data together with recognized metrics. Since its launch the GRI's framework has grown its distribution and reputation among companies of all over the world, and in every kind of sector. According to KPMG, nowadays, around 80% of the 250 biggest companies use GRI's framework to report on sustainability (Weise, 2011).

Performance Indicators and GRI Indicators

A key role of every kind of guideline for reporting, as well as for benchmarking, is played by the indicators and how they are selected.
The indicators can be defined in many different ways, but we can describe them as something that, as stated by EUROMED, "enables you to understand your position in relation to where you want to go and under certain conditions; it shows you the way to do so." (EUROMED Sustainable Connections, 2008)
With this definition in mind hereafter I present the GRI indicators, which have been developed as a list of key performance indicators to be used for sustainable reporting. Those indicators are intended to cover all the relevant issues within: economy, environment, human rights, labour, society, and product responsibility. Each issue has a number of core and additional performance indicators. The **core** indicators are intended to be the one on which a company should report (to declare a compliance level of A type), while the **additional** indicators instead are representing emerging trends and issues that may be relevant to consider, but not for all kind of organizations – both type of indicators have been developed together with the numerous stakeholder that are part of the GRI network. (Global Reporting Initiative)
However the GRI also realises more precise and tailored Guidance and Indicators for some sectors, which are: Airport Operators, Construction and Real Estate, Event Organizers, Electric Utilities, Financial Services, Food Processing, Media, Mining and Metals, NGO, and Oil and Gas, plus some pilot versions on Automotive, Logistics and Transportation, Public Agency, Telecommunications, and Apparel and Footwear. (Global Reporting Initiative - GRI, c)
And the sector I am taking into consideration for this study is the food industry.

1.5 Food sector

The food and beverage industry is an extremely interesting and fragmented reality; indeed there are numerous and different divisions along the chain. To give an idea we can mention the main ones usually considered: the agriculture sector, which is supplying raw materials from crops, livestock, and sea food; the processing process, which transform goods into canned and packed products (and as well frozen food); the research and development of new technology, such as

fertilizers, machinery, and genetic modify organism; regulation and financial services for production and distribution; finally, the packaging, distribution and retailing. (EconomyWatch)

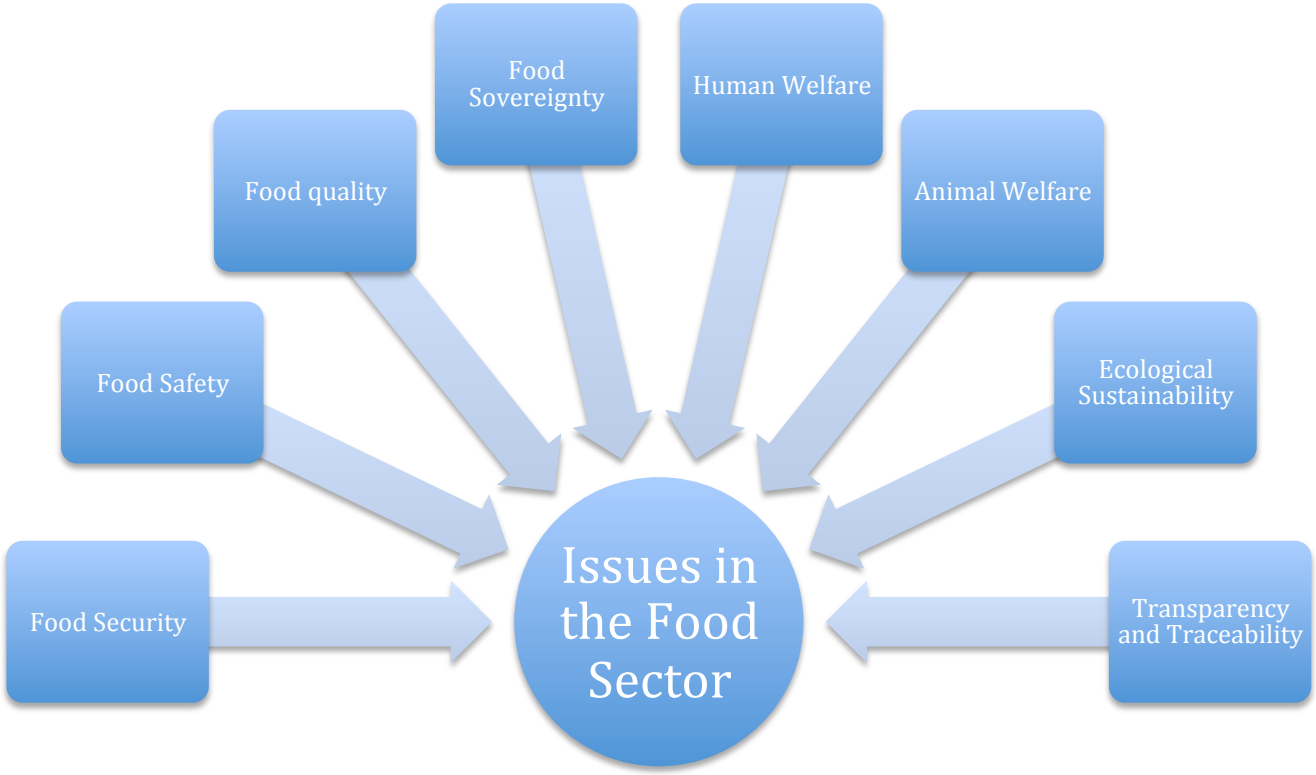


Figure 1 – The main issues that characterize the food industry.

But what is most appropriate to consider here, is probably the social and ethical issues that characterize the food sector. Indeed this industry has been, and still is, characterized by numerous concerns on the impacts of its activities, all across its value chain. The main issues that affect the food sector can be divided in 8 groups (see also Figure 1):

- **Food Security** – Which tries to guarantee enough food supply to the worldwide growing population, together with a fair distribution of resources.
- **Food Safety** – It concerns the protection of the consumers' health by foodborne risks (such as: microbiological, toxicological, and nutritional risks).
- **Food Quality** – It regards the composition, appearance, and compliance to certification schemes.
- **Food Sovereignty** – Guarantee that people, and particularly the local communities, have still the possibility of producing their own food.
- **Human Welfare** – It is a really important issue which is determined mainly by the labour practices and the working conditions.
- **Animal Welfare** – To guarantee them fair treatment and conditions.
- **Ecological Sustainability** – Which aims to avoid the overconsumption of natural resources, and the limitation of the environment impacts – on ecosystems and living organisms.

- **Transparency** – To provide the stakeholders with access of information on company's activities, decisions, standards, etc..
- **Traceability** – The possibility of tracking back the production chain of a good (across increasingly complex supply chains).

(M. Deblonde, 2006)

Benchmarking the food sector

Traditionally the assessment of sustainability within food industry has always been focused mostly on agriculture; despite this, in the last years there has been attempts to develop more comprehensive methodologies in order to include also other steps of the industry – e.g. processing, transportation and retailing. To accomplish this, various approaches have been developed, for example: considering the effects at regional, industrial, and firm levels; a lifecycle approach to sustainability impacts; farm economic; food miles; energy accounting in product lifecycle; ecological footprint; mass balance of food sectors; and farm sustainability indicators. (Natalia Yakovieva, 2009)

2. Problem formulation

One of the biggest challenges that companies are facing nowadays is the increasing demand for transparency regarding their activities, particularly within sustainability. Indeed, investors, policy makers, and other stakeholders are progressively seeking to evaluate companies' performances not just from an economical point of view, but also for the social and environmental aspects (Weise, 2011). From here it comes the challenge of measuring the sustainable activities to be able to quantify the initiatives within sustainability, and improve them.
To achieve this purpose numerous, and different, approaches can be, and are, used. However, benchmarking is one of the most accredited systems to do so inside a company, even if is not free from imperfections (see Introduction chapter).
Thus, a company that wants to benchmark autonomously its activities with the ones of its competitors, in order to improve its performances, would most probably start and develop a completely new methodology since there is no standardized way of benchmarking. The problems that most probably they would have to face, and the ones on which is interesting to work on, are several – how also presented in the Introduction chapter.
However the methodology suggested in this study tries to find an answer mainly to three points:

1. The **feasibility** of the suggested tool, which should be neither too complex, as some developed by independent companies, where employees have to work on it full time all over the year; nor too abstract to be applied in a real situation. Concerning this last point, a representative example is the Graafland benchmarking tool: here, indeed, even if a strong robustness of the tool is demonstrated, the responding rate of the questionnaire on which is based amount to just 15.3%, and with such a answering rate no company (and probably consultancy as well) would invest in such a benchmark system. (Graafland et al., 2004)
2. The necessity of finding reasonable and shared **indicators** to represents the sustainability activities of the company in analysis. Since most of the time each benchmark tool is developing new indicators, feeding in this way the proliferation of different parameters, and the consequent devaluation of them – and the related benchmark tool. The indicators should be shared and agreed by a group of stakeholders, comprehensive of all the three pillars, in order to provide a clear picture of the situation, and at the same time be easy to use.
3. The absence of a benchmark tool that is considering both the **activities** as well as the **commitment** of a company, within sustainability. Most of the benchmark tools are design to compare the activities which the companies are running, or the project they did, they are not considering their commitment. The GreeResearch states to have developed the first sustainability benchmark tool for environmental goals (July 2011). However it does not seem to exist a benchmark tool that takes into consideration both the activities and the goals of firms – which, to me, it would provide a more complete picture of company's best practices and intentions within sustainability; how also it has been underlined from

the academia environment, which is asking for indicators also for the targets declared by the companies. (Lee, 2008)

Research question

Because of these problems, and of others pointed out in the Introduction chapter, the aim of this study is to create a methodology for a benchmark tool, which tries to cover those lacks, and that is feasible and easy to use for different and "competent" target groups, such as: small consultancy, think tanks, NGOs, and Small Medium Enterprises.

Thus the research question is defined as follows:

How to build a methodology for benchmarking on sustainability? – Adopting the GRI indicator for the food sector.

The aim of this work is therefore to create a comprehensive and feasible tool, which is adopting shared indicators, and is also able to measure the commitment of the company. Thus such methodology can raises its credibility, increasingly spread, and consequently contributes to the reduction of the proliferation of other tools.
While a secondary purpose of this study is to create a methodology that can provide the framework for the development of other benchmark tools (more focused), creating a common methodology, characterized by the GRI's indicators, and the inclusion of targets.
These last two purposes are part of the same aim, since to achievement of the second would not happened without the accomplishment of the first.

3. Literature review

This chapter is intended to be an excursion on the different benchmark tool for sustainability, and their methodology, which have been taken into consideration for this study. The presented literature review aims to give a basic knowledge on the tools selected, in order to understand the different approaches, delimitations, and characteristics, which are characterizing the benchmark tools scenario. The aim is provide information on: the firms or persons who developed the methodology, how has been done, why, how the data have been collected, what is addressed, which are the different KPIs and how they are use and calculated.
This review of methodologies is designed to give the ground knowledge to the critics that, in the Analysis chapter, are moved towards these tools.

3.1 Dow Jones Sustainable Indexes (DJSI)

The Dow Jones Sustainable Indexes (DJSI) have been launched in 1999 and it is managed by a partnership between the Dow Jones Indexes, and Sustainable Asset Management (SAM) Group, an international investment company (Switzerland-based). They have been the first global set of sustainability benchmark, which is evaluating the sustainable performances of the 2,500 biggest companies listed on the Dow Jones. The DJSI is a family of indexes, which includes global as well as local indexes, some of these are: World (the most referenced to, and the one I am presenting the methodology), European, Eurozone, Nordic, North America, US, Asia Pacific, Korean Index, etc.. The aim of these indexes is to benchmark the sustainable performances of companies – on economic, environmental, and social criteria – in order to provide useful information to investors that are considering those issues in their portfolios. (CME Group Index Services LLC a)
The DJSI World is dividing companies from 27 countries, from all over the world, in 58 sectors. The methodology is based on a set of criteria to evaluate the opportunities and risks – within economic, environmental, and social sphere – there is no clear disclosure on those criteria (SAM, 2011). SAM is using different **sources** to gain information on companies' practices, for instance: they submit online questionnaire to the companies, ask for documentation such as policies and reports (in addition to the one already publicly available), and they also have some direct contacts with the companies themselves. All the information received are verified by crosschecking answer with public documents, media and stakeholder reports.
The **criteria** adopted in the methodology are general as well as specific ones – tailored to the industry in analysis. The general criteria, which account for around 40% of the total, are defined for all the dimensions of sustainability, and are applied in all the sectors. For instance, the general criteria adopted in the 3 dimension of sustainability are:

- Economic
    - Corporate Governance
    - Risk & Crisis Management
    - Code of Conduct/Compliance/Corruption and Bribery

- *Industry Specific Criteria*

- Environment
  - Environmental Reporting
  - *Industry Specific Criteria*

- Social
  - Human Capital Development
  - Talent Attraction & Retention
  - Labour Practice Indicators
  - Corporate Citizenship and Philanthropy
  - Social Reporting
  - *Industry Specific Criteria*

While the specific criteria instead are reflecting the particular issues of the sector, and they account for approximately 60% of the final assessment. The assessment of a specific industry takes into consideration all the three sections (economic, environmental, and social), including also the answer from the questionnaire and the results from a Media and Stakeholder Analysis (MSA); lastly, the 10% of top performing companies are declared as sector leaders. All the information regarding the corporate sustainability assessment are verified by independent third parties, for instance PricewaterhouseCoopers and Deloitte. (SAM, 2011)
Finally, SAM has a constant process of **review** and update which take place annually, and quarterly, and it follows a precise process, which is based on different parameters: Sector Classification, Corporate Sustainability Assessment, Ranking within Sectors, Eligible Industry Groups, Eligible Companies, Component Selection, and Market Capitalization Coverage. (CME Group Index Services LLC b)

3.2 The Global 100

The Global 100 Most Sustainable Companies list has been published the first time by Corporate Knights (CK), a Toronto-based media, research and financial products, in 2005. Now also Global Currents, Inflection Point Capital Management and Phoenix Global ADVISORS LLC (Phoenix), consultant and research firms, are contributing to the research. The aim of such ranking is to promote the investment, and therefore the return, of the most sustainable companies. To do so the companies are selected through a **methodology** constituted of two stages:

1. Phenix[1] is selecting 400 companies out of 3,5000, both from developed and emerging market stocks, on their sustainability performances, based on the ranking provided by the Global Sustainable Research Alliance (GSRA), and on their performance to financial stress, tested by Global Current (an investment advisor firm).
2. The 400 selected are analysed by Corporate Knights using its 11 KPIs, then the top 100 large-cap are picked up (BLOOMBERG PROFESSIONAL® service is verifying the data).

(Global 100 a)

[1] A consulting and technological platform for the integration of ESG research and financial performances.

The 11 **key performances indicators** which are used by Corporate Knights are:

- Energy productivity
- Greenhouse gas productivity
- Water productivity
- Waste productivity
- Innovation capacity
- % Taxes paid
- CEO to average employee pay
- Safety productivity
- Employee turnover
- Leadership diversity
- Clean capitalism paylink

The Companies' final Global 100 is ranking companies on percentage – from 0 to 100%. The same principle is applied to the single KPIs, indeed the final score is simply given by the average score performed in the 11 KPI on which the companies have been assessed on.
8 out of 11 KPI are following one equation, in which the score is given by 0.75 for the group percentile score[2] + the improvement factor[3] score on the previous 2 years (0 or .25); while the last 3 are following three other ways. (Global 100 b)
The financial **data**, together with the ESG, are gathered by Corporate Knights Research Group and verified by Bloomberg Professional Service. An important contributions are coming from: the Global Sustainability Research Alliance (GSRA), which integrates the global researchers in North America, Europe and the emerging markets, and the Asian Sustainability Research Alliance (ASRA), which provides in-depth coverage of Asia emerging market stocks. All the data collected for the study are coming from public domain documents. (Global 100 c)

3.3 Graafland (2004)

The benchmark tool developed by three professors of the Tilburg University in The Netherlands (Graafland, Eijffinger, and Smid) is a really interesting benchmark tool. After a long evaluation of the strong and weak points of benchmarking they designed their own methodology, as solution of the founded issues. This methodology, which takes into consideration all the three pillars of sustainability, is structured as follows:

- They focused on *4 sectors* (construction, retail, chemical, and financial and banking), considering **70 parameters** in relation with *6* groups of *stakeholders* (employees, suppliers, customers, society at large, shareholders, and competitors).
- The **score** assigned for category is 0, ½, or 1, where 0 is no compliance, while 1 represents the full compliance, and ½ partial compliance.
- The **information** has been gained by the use of questionnaire, and the answers are verified thanks to the publicly available documents.

[2] The *group percentile score*, for example of GHG, is obtained by percentile ranking the entity's GHG productivity score against that of industry group peers in the same equity index as the entity in question. (Global 100 b)
[3] The *improvement factor score* is determined by measuring the trailing two year improvement in the entity's group percentile score. (Global 100 b)

- In the second part of the questionnaire the company and some NGOs are asked to evaluate the relevance of the 70 parameters presented (with 0, ½, 1), and to weight the importance of the different stakeholder groups.

What characterizes this methodology is that, the final benchmark result is based on the weighted sum of the score given by the answer provided by the companies and the NGOs interviewed. This is aimed to evaluate more properly the considered parameters into the benchmarking tool; however this inquiring methodology has a relevant defect that is explained later on in the Analysis chapter.

(Graafland et al., 2004)

3.4 Yakovieva (2009)

Natalia Yakovieva, who worked at ESRC Centre for Business Relationships, Accountability, Sustainability and Society, Joseph Sarkis, professor at the Clark University and Thomas W. Sloan from the University of Massachusetts Lowell, developed an interesting and well structured benchmark tool for sustainability inside the food supply chains. The data that they gathered for their tool are coming from the supply chain of food industry in the United Kingdom. The peculiarity that characterizes this methodology is the adoption of the Analytic Hierarchy Process (AHP), which enables to properly weight the experts' opinion, transform them in ratings, and use them to evaluate the indicators adopted in the benchmark tool.
The study presented considers just the supply chain of two products, potatoes and chickens; and for instance, the stages considered of these supply chain are: agriculture and farming, processing, wholesale, retail, and catering. The methodology developed recognize 5 major stages:

1. **Identifying sustainable indicators:** starting from the selection of objectives of sustainable development from UNCSD (1998) and Agenda 21 (UN 1992), which includes:
    - Economic:
        - Promotion of economic growth
        - Encouragement of open and competitive economy
        - Changing consumption patters
    - Social:
        - Creation of productive employment
        - Achieving equality
    - Environmental:
        - Creation of resources use
        - Protection of natural environment

    From which general indicators were chosen. These indicators are general enough to be applied to all stages of the supply chain, as well as to different food products. Initially over 50 indicators were selected, then they have been reduced to 45, 9 for each of the five stages (of those, 3 per dimension).

2. **Raw data gathering:** took place within institutional organization: the Department for Environment, Food and Rural Affairs (DEFRA) for the agriculture sector, and the Office for

National Statistics (ONS), for information on the British food industry.

3. **Data transforming using performance rescaling:** the U.K. economy average or the food supply chain average values have been used to normalize the indicators. The scoring system of the indicators is from 1 (low benefit to sustainability) to 6 (high level of benefit), when no information is available the score is 0.

4. **Adjustment of data using Analytic Hierarchic Process (AHP):** with this multi-attribute rating scheme the aim is to weight the expert opinion on the performance of these indicators amongst each other. The AHP approach needs a decision hierarchy, and at the top of it is placed the overall goal, then the importance of indicators amongst them is analysed.

5. **Sensitivity analysis of results:** where the robustness of the outcomes is tested through the alteration of data – changing one dimension weight from 0 to 1.

(Natalia Yakovieva, 2009)

3.5 The Green Research (2011)

The Green Research is a small research and advisory company based in New York, and, the 26th of July 2011, it introduces the first benchmarking tool for corporate environmental sustainability goals.
The work started with the publishing of different reports, on: computer industry, food processing, telecommunication, and banking, and with the analysis of sector leaders such as: Hewlett-Packard, IBM and Dell; Nestlé, Kraft Foods and Danone; and AT&T, BT Group and Vodaphone; Citigroup, Wells Fargo and Deutsche Bank (top companies on the Forbes Global 2000 list). The first report to be released it was the one on the computer industry, and it shows how this sector has an average of 14 public sustainability goals (half of them on product and packaging).
This benchmark tool enables the differentiation based on the type of goals, if they are quantitative or qualitative, long or short term, and according to the issue addressed. (Schatsky a, 2011)
The goals that have been selected for this tool have to be specific, quantitative, or time-bound, while the vague or undefined ones are excluded. Furthermore the goals are organized in three or four different categories, according to the stage of production in consideration (and sometimes of the sector):

- **Operations:**
  - Greenhouse gas emissions
  - Waste management
  - Water use
  - Energy use.
- **Product and packaging:**
  - Energy and eco-efficiency.
- **Recycling and reuse:** with differentiation between operational and product dimension.

- **Responsible sourcing** – sometimes present in the food industry.

(Schatsky b, 2011)

3.6 Centre for Sustainability and Excellence (2012)

The Centre for Sustainability and Excellence is a small international firm based in Athens, which is working mainly as consultant and training company within sustainability. In the first three months of this year, during my internship at the Centre for Sustainability and Excellence (CSE), I started and finished a benchmark tool on sustainability, which now is available on CSE website amongst its consulting services.
This benchmarking tool consists of a 20 inquires questionnaire used to rank the sustainable performances of potential clients (it is a free service offered on line). The questionnaire uses both closed and open questions (see Figure 2), and the KPI used to give the final score are:

- The presence of a **Board of Committee**.
- Publishing **CSR or Sustainability Report**, and the adoption of any **Recognized Guidelines** (such as GRI or UN Global Compact).
- Ranking in **Sustainability Indexes**.
- Gained **Awards, Recognition or Certification**.
- Having **Initiatives** in all the **four pillars** of sustainability (marketplace, environment, workplace, and community[4]).
- The adoption of **KPI** for the **evaluation** o the successful implementation of activities.
- **Auditing** the sustainability performances amongst employees and or suppliers.
- Setting **Targets** in at least 2 pillars.
- The **embedding** the sustainable **targets** into everyday management.

While the open questions are asking the companies:

- How do they engage with employees and the community
- If they have programs to reduce carbon emissions and energy consumption
- Which is their best initiative within sustainability
- How do they set targets within sustainability

After that the client end to answer, he will receive two automatic replies expressing how much he is performing on sustainability (expressed on a score scale from 0 to 100%), and a qualitative feedback report, in which their sustainable activities are compared with the one of the top 10 performing companies of their sector.
The creation of such indicators and questions was mainly driven by the necessity of covering as much as possible within sustainability in only twenty questions – thus, intentionally superficial. For CSE, the intention of such benchmark web-tool is to attract potential clients into the CSE's clients network. Thus, it is deliberately not exhaustive, in order to push respondents companies

[4] Those pillars have been developed by CSE, here instead, apart from the Environment which is undifferentiated, the Economic is replaced by Workplace, and the Social is divided into Workplace and Community. The aim of such four pillars was mainly driven by the necessity of providing a stronger focus on company's stakeholders. Furthermore this view is also shared by some companies, such as Coca-Cola and Kellogg's, which both report on sustainability following these four areas.

to ask for further explanation and consultancy service, which, this time, would have to be remunerated.
To create the database of this benchmark tool, I have selected and analysed (from public documents) the top performing companies on sustainability according to the Dow Jones Sustainable Index and the 100 Most Sustainable Companies for 2012. The initial aim was to divide the companies in the three areas in which CSE usually operates (Europe, North America, and MENA), but the actual launched questionnaire, for time limitation, includes just companies from Europe – later one the other two should be added.
The sectors to be addressed with this questionnaire are four (Food and Beverage, Bank and Insurance, Pharmaceutical and Chemical, and Oil and Energy), plus a general one. There is the chance that in the future other sector will be included (such as: Automobile and Transportation, Households and Personal care, etc.).
In contrast with what has been observed in the other methodologies, here sustainability is divided in four areas, for instance: marketplace, environment, workplace, and community. The activities within the four pillars of sustainability have been taken into consideration together with: the presence of awards and recognition within sustainability, the presence of a structured way of reporting, and the presence and absence of targets for the four pillars.

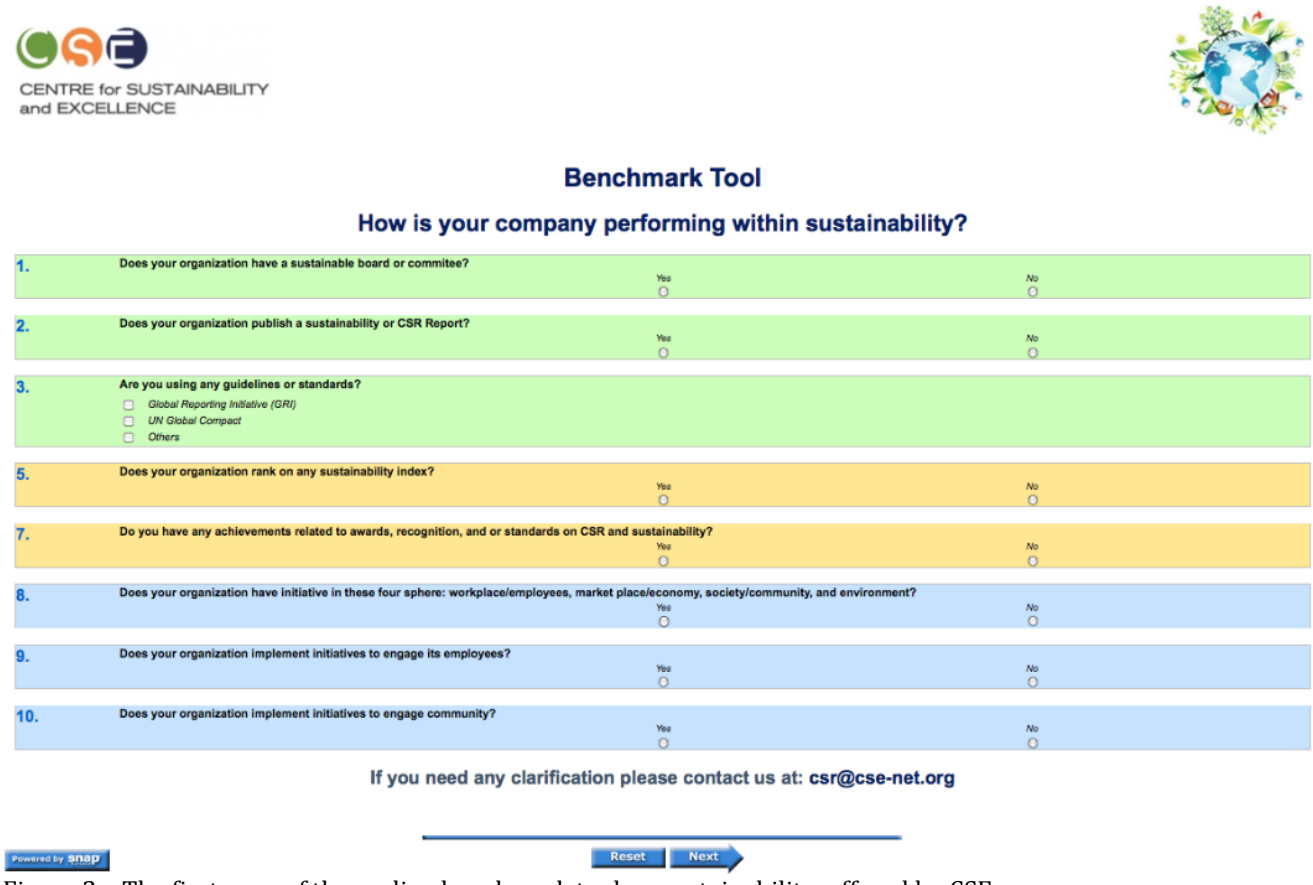


Figure 2 – The first page of the on-line benchmark tool on sustainability, offered by CSE.

It is difficult to compare such a different representation of methodologies, which are characterized by distinctive approaches and diverse disclosure of information. However, it is possible to say that 4 out of 6 are considering all the 3 pillars of sustainability, while CSE's tool is dividing sustainability in 4, and the Green Research instead is considering jus the environmental

one. Most of the benchmark tools are based on the publicly available data and information, and just a couple of them were actually asking further information to the companies (DJSI and Graafland). The KPIs adopted goes from 10 to 70, with different way of weighting, and scoring; indeed, almost every benchmark has different indicators and system of calculation. Finally, just two of them are considering the targets set by the company, the one developed by CSE, and the one of Green Research, which is actually just for targets.
To summarize the main findings of the different tools, hereafter a table underlines the relevant aspects per each methodology (see Table 1), according to the interests of this study.

Table 1 – Characteristics of the different benchmark methods.

	Focus	Source of Information	KPI & Weighting	Targets
Dow Jones Sustainable Index	Economical, social and environmental	Corporate data sources, public information, and third parties	12 KPI, 40% for the general and 60% for the specific ones	/
Global 100	Economical, social and environmental for a total 11 KPI	Corporate data sources, public information, and third parties	11 KPI equally summed	/
Graafland et al. (2004)	Economic, social and ecological performance, 70 categories (4 sectors)	Questionnaire plus check by using public information	70 KPI, the weight are based on the responses of companies and NGO's	/
N. Yakovieva et al. (2009)	The 3 pillars, and the supply chain of food sector (potatoes and chicken)	Two different U.K. institutions: DEFRA and ONS	45 KPI, with equal weight, but adjusted on experts' opinion	/
Green Research (2011)	Environmental targets	Corporate data sources and public information	/	Considered just quantitative or time bound goals
CSE	4 pillars and (4 sector plus a general)	Corporate data sources, public information, and third parties	10 KPI, with equal weight	General commitment

4. Methodology

The aim of this benchmark tool is not intended to measure the effectiveness of the promoted activities or initiative of companies, neither is designed to suggest a ranking system or a "best in class". The purpose of this benchmark tool is to measure and compare the different corporate practices and initiatives within the CSR sphere, focusing on the Food and Beverage industry, pointing out the average and best-known practices. The reason for this is that this benchmark tool is intended to emphasize the trip towards sustainability, is not intended to suggest the achievement of sustainability "status".

4.1 Selection of sector and level

Since trying to keep the benchmark tool on an undefined and broad level would not have helped to build a reliable and trustful tool, one of the first things to define is what the benchmark tool will address, and particular, which sector. The choice went on the food and beverage sector.
The reason of this is mainly driven by the experience, and knowledge, that I have developed on this sector in one of my internship, for instance at Fairfood International. Here, indeed, I had the chance to gain considerable awareness on which are the main issues and challenges of this interesting sector, and on how companies are facing sustainability in the food and beverage industry – thus I could more properly evaluate the relevance of the chosen indicators.
Even if there are numerous references in literature on how few has been written on benchmarking sustainability at the supply chain level of the food and beverage sector (Natalia Yakovieva, 2009), this study is not focusing just on this aspect, but also including the organizational level. The reason of this choice is that, even the focus on food sector is presented, the benchmark tool's propose is to be a useful model also for development of methodologies in other sectors. Therefore, narrowing down to a particular step, a series of steps, or even just a product, despite making the tool more specific, it may compromise the flexibility that this kind of methodology wants to have, compromising as well the chance of being implemented in other sectors.

4.2 Selection of benchmark tools

Before develop a specific tool for benchmarking sustainability within food and beverage sector, this study take into consideration different benchmark tools. This choice is given by the fact that numerous benchmark tools have been developed until now, and therefore the production of a new one can not be aside from the already existing ones; particularly from their strong and weak points.
Therefore the reason to choose these six benchmark tools is driven by the necessity of representing the broad scenario of systems proposed by organizations and academia within this field; this enable us to have a proper (even if limited) overview on the benchmark tools, their methodologies, and the different weakness that each one has (as well as strong points). To accomplish this aim, the selected benchmark tool are the followings: the Dow Jones Sustainable

Indexes and the Global 100 Most Sustainable Companies in the world, to represent two extremely well structured and organized methodology developed by independent analyst firms and consultancies; Graafland and Yakovieva, to show some tools developed by academia professors; the Green Research tool, to represent a methodology focused just on the targets set by the companies; and finally, the tool I developed at CSE, as an attempt to integrate the benchmarking of the activities with the one of goals.

4.3 Design of the new benchmark tool

There are numerous possible ways to design a methodology for benchmark tool, however, the methodological framework developed for the tool proposed in this study consists of three major stages:

1. **Adoption of sustainable KPIs** - The indicators used are the one of the GRI Guidelines (core + the additional of the food sector), using its division, which differentiates in: economic, environment, society (labour practice, human rights, and society), and product responsibility.

2. **Data collection** - The information are gained from the public available ones and third party source. I was planning to make interviews to companies at CSR Europe, but unfortunately I could not accept the internship, and therefore include this part.

3. **Data transformation and rescaling** - Each indicator (as well for targets) can score 0 for no mention, ½ vague mention, 1 clearly mentioned, and the weight of information is always the same.

Use of indicators

The choice of indicators for this benchmark tool has been driven by the necessity of finding the right balance. Indeed the proposed indicators are designed by: the facility of finding amongst the company public documents, and their relevance to the inquired sector – the food one.
Indeed, the GRI indicators are designed, developed, and recognized by a multitude of stakeholders; furthermore the 80% of the biggest companies worldwide are reporting according to the GRI guidelines, therefore are using exactly those indicators, making easy for an assessor to find the relevant information. (Weise, 2011)
The reason to keep into consideration just the GRI indicator is given by the willingness of keeping a simple structure of the tool, but still complete; increasing the chance, for it, to be used and understood by different actors (always assuming a basic – or easy to fill – knowledge on the GRI Guidelines). Beside this, the inclusion of other parameters, system of measurement, or the creation of new ones would have voided the facility of data collection, mining therefore a characteristic of the suggested tool. Even if a some other indicators may still be find, I assume these are the most appropriate for the purpose of the study. Thus, because of their strong credibility, and their wide adoption, these indicators are the ones adopted for this study.

4.4 The assessing methodologies

Literature review methodology

In the literature review it has been hard to illustrate the different methodologies in the same way, since the structure of the tool are significantly different, and as well the disclosure of information change – both on the quantity level, and the quality one.
To obviate and reduce such dissimilarities I tried to present them following a similar scheme of description. Such scheme is presenting: the firms or persons who developed the tool, with which purpose, the way of collecting data, what are addressing, and the different KPIs and the way of calculate and weight the score.

Analysis methodology

The analytical critic that is developed in the Analysis chapter has the aim of emphasizing the mismatches between the methodology of the benchmark tools analysed, and the problems that want to be solved by this work of thesis. To do so the analysis is presenting the main issues, both from a literature perspective (even if limited sources of critics have been found), and according to the Problem Formulation chapter. Those critics are mainly addressing:

- **Indicators**
  - How they have been developed (with interested stakeholders or not, etc…)
  - Shared and recognized
  - Covering all the sphere of sustainability
  - Enabling a good understanding per sphere[5]
- **Feasibility** – Thus see which can be the limits for applying that methodology inside a small company, or one with limited resource to invest.
- **Objectivity** – Guarantee that information other than empirical data are crosschecked by proper and competent companies and or institutions.
- **Measuring commitment** – Include the goals and commitment of companies inside the benchmarking process.
- **Disclosure** – The tools analysed have different level of disclosure on their methodologies

4.5 Delimitation

This work of thesis is considering the sustainability initiatives and performances undertaken by the company, regardless the nature of business or the final product of the firm. The reason of this is that this would be out of the purpose of the benchmark tool, which is focused on the production and organizational chain. The unsustainable nature of the business may be suggested by the outcomes of the benchmarking process, however this result should not be lead by other driven factor, such as ethic.

It was planned to have interviews to test and ask the relevance of the chosen indicators, and on the methodology, to some companies. The chance would have been provided by the internship at

[5] There is no precise number of indicators that can guarantee an appropriate covering and deep view per pillar of sustainability, however, apart from the general ones, all the main issues of the sector in analysis should be mentioned.

CSR Europe; but unfortunately this opportunity did not take place for technical reasons. Thus this work thesis does not include direct interview to businessmen, which could have enforce the choice of this methodology (or even not).

What is suggested here is a methodology to develop a benchmark tool, it is not a finished benchmark tool. It may seem pointless to make such a specification, however the difference is that the benchmark tool may be considered as something defined and finished, instead the methodology can also provide the basic structure for building more benchmark tools.
Furthermore, because of its nature of methodology, it has not been provided a clear methodology of verification for the data collected for benchmarking, even if a suggestion on how it may take place is given in the New Methodology chapter.

Lastly, due to the limited time frame for developing the benchmark tool, it has not been tested.

5. Analysis

In this chapter are presented the main critics to the six analysed benchmark tools. Those critics are coming both from literature and in accordance to the problem formulation.
The reason for this is not that those tools are missing of positive aspects, but for the purpose of this study is preferable to underline just the weak points of such tools, in order to respond to the formulated problems formulation – some are more conceptual while others may be methodological critics. Indeed, the presentation of those methodological issues is aimed to justify the necessity of a different benchmark tool which can sufficiently cover the issues underlined in the problem formulation, and which do not find answers in the presented tools– such tool will be presented in the next chapter.

5.1 Dow Jones Sustainable Indexes (DJSI)

The DJSI is one of the most known benchmark tool worldwide, and it has been mentioned in *Rate the Raters*[6]*, phase 3* as one of the best benchmark tool for sustainability. It is very well structured and has an extremely well defined methodology, which has been continuously developed and improved for over 10 years now – since its creation in 1999.
The DJSI has several good aspects on its side: it provides a clear and broad picture on economic, environmental, and social performances; it outclasses major world stock markets; it provides transparent data; it suggests the companies of the index on how to increase their sustainable performances (and result in the Indexes); high international credibility (an independent study commissioned by UNEP Finance Initiative indicated the SAM Corporate Sustainability Assessment as "the most rigorous in terms of the number of questions and depth of information requested."). (MBA Sustainable Enterprise, 2004) (CME Group Index Services LLC c)
For all these facts, the DJSI's methodology is a really **complex** one, which can not be handle by a small firm or consultancy, but need constant monitoring and revising process, which can just be guarantee by a numerous group of people working on it full time – as SAM is doing. Thus, it cannot be considered as a valid methodology for our purpose, since it does not answer to the feasibility criteria – set in the problem formulation.
A second point of critic it comes from the indicators adopted. Indeed the amount of KPIs provided is just 12, and there is limited information about what these general criteria should assess – indeed there is no **disclosure** on the sub-criteria, which should give an idea of the assessed issue. For instance, to give an example, the environmental sphere just indicates the Environmental Reporting and the Industry Specific Criteria as criteria, but there is no clear information on what these criteria and the related sub-criteria should refer to.

[6] *Rate the Raters* is a comprehensive study on panorama of the sustainable rating systems, developed by the think tank SustainAbility and released in four stages – from May 2010 to July 2011. The phase one is describing the current state of ratings; phase two is going deeper in such analysis and providing a disclosure of methodologies, patterns and trends; phase three is selecting 21 rating to be analysed further and see if they are effectively driving business towards sustainability; finally the fourth phase is making projections on the future of sustainability ratings.

5.2 Global 100

The Global 100 Most Sustainable Corporations in the World is often mentioned as one of the most developed tool on the market – indeed *Rate the Raters, phase 3* is often mentioning its methodology amongst the best practices. But, as it is possible to expect, the Global 100 is a really **complex** tool that required (according to their methodology) an extensive initial research and ESG assessment – from how is presented from its selection process, in which numerous consultancies are involved (Global 100 a). But the weakest point, according to the purpose of this study, is the **few indicators** adopted, which, furthermore, are following different ways of scoring. Indeed, the KPI adopted are just 11, and, even if they approximately cover all the three pillars (there is no clear mention to that), those indicators cannot be considered enough to have a clear picture of the sustainable performances of the companies in analysis – even if, compared to the DJSI, they are clearly explained. Furthermore the scoring system is the same for 8 KPI (see Literature Review Chapter), and then the others 3 are different. This is not affecting the results, however, since just a few indicators are selected, it would have been more accounting to have the same methodology for each one of them.

It has to be mentioned the fact that the Global 100 and the DJSI are more designed to have as output a ranking for top class companies, rather than showing the benchmarked activities of firms – even if the DJSI is offering services to improve performances.

5.3 Graafland (2004)

The tool offered by Graafland, Eijffinger, and Smid has a strong theoretical base, and as well an interesting innovative points. In fact, Graafland et alter are offering a tool which is characterize by a strong methodology, and an interesting engagement of the companies and NGOs in the evaluation of the relevance of the chosen indicators and stakeholders – even if this choice may be criticised since the study may lose in objectivity.
What does not make this kind of methodology the most appealing one to be followed is the really **low response rate** that it has for this feedback questionnaire on which is based, indeed the response rate is 15.3%. So, even if this approach can be defined as strong and successful inside the academia environment, such low value of responses is clearly not able to justify the time and money investment that such methodology would required to be run, particularly by a small consultancy or a SMEs. It follows that also the adoption of other forms of questionnaires and feedbacks from relevant stakeholders would not be convenient, unless a more strong engagement would be promoted. (Graafland et al., 2004)

5.4 Yakovieva (2009)

The benchmark tool presented by Natalia Yakovieva, Joseph Sarkis and Thomas W. Sloan is a well structured one for the food supply chains, and it is having a interesting approach with the use of Analytic Hierarchy Process (see Literature Review chapter). However some critics may be moved to the fact that, according to their experts, the economic dimension is considered "the most significant contributor to sustainability". We do not want to discuss the relevance of such element (and its position as "real" driving factor), however it should be evaluated as important as the other two pillars (social and environmental), otherwise we could not talk about *sustainability*.

This suggests how the point of view of the **expert** may significantly influence the outcomes of the research, how indeed happened for Yakovieva et al.'s study – where the impacts were weighted according to the experts' opinions (Natalia Yakovieva, 2009).

5.5 The Green Research (2011)

Find points of improvement for this benchmark tool would not be impossible. The main purpose of presenting it with the others is aimed to introduce a benchmark tool that have been developed just for the analysis and comparison of the commitments and, more precisely, the quantitative goals of company within the environmental sphere. Actually, the easiest critic to move to this tool, apart the basic methodology (it just counts the number of gaols), is the fact that it could have included also the goals in the **other dimensions** of sustainability (social and economic), to have a more complete picture of the goals towards sustainability. Indeed measure and compare the intention of progress, and the quantitative targets that companies are setting, can be an interesting parameter to consider to benchmark more completely the sustainable vision of companies.

5.6 Centre for Sustainability and Excellence (2012)

The Tool developed as CSE has some good points, such as having both quantitative and qualitative outcomes, as well as the consideration of commitments together with the undertaken activities. However, the limits of this benchmark tool are numerous, since the limited time I had it to develop it, 3 months, and the fact that is service publicly available on the CSE's website, thus intentionally not too elaborated. Thus, the issues that can be considered as the most relevant to point out for this study are mainly two. Its **simplicity**, which is far to represent the complexity of sustainability's activities and initiatives, indeed it is composed by only 20 questions and it has less than 10 KPI; and, secondly, the **choice of parameters**, which is rational, and considering the four dimension of sustainability (marketplace, environment, workplace, and community), but is not validate by a recognized methodology, or guidance such as the GRI, and is not giving a superficial vision on sustainability issues.

However, is starting from this benchmark tool that I am trying to develop the one for this study, since already here I brought a key element that I will represent in this tool, the integration of the performances together with the commitment of the companies.

6. New methodology

In this chapter I suggest a different way of building a sustainable benchmark tool, a different methodology, which is still extremely comprehensive, structured, and at the same time simple to use, so this model can spread, and more company will join it boosting the credibility effect.
Starting from the defects that have been pointed out by the six benchmark tools presented in the previous chapter (the Dow Jones Sustainable Indexes, Global 100, Graafland, Yakovieva, the Green Research, and the CSE tool), I summarize the points that should be improved, and then presenting my methodology as a solution to those issues.
The different issues that are rising from the inquired methodologies can be summarized as followed:

- Half of them are actually adopting few indicators (or that give just a partial analysis), or having limited disclosure on them.
- One third of the tool is characterized by a high complexity, quantity of data, and dedicated-employees request, that can not be feasible for the target group of this study.
- Another third of the methodologies are too simplified or considering just one pillar of sustainability.
- Lastly, a couple of tools seem to be misled in the judgement by not objective consideration.

There may be different approaches to build a methodology that is able to balance amongst the requirements of the Problem Formulation and the weakness of the just presented tool. However, the methodology presented hereafter seems to be the most suitable to the case, allowing the development of an easy benchmark tool for small consulting firm or small and medium companies that want to benchmark themselves with competitors.

6.1 The methodology

The structure that this methodology follows is characterized by the following three steps, which characterize the order followed in the design phase. These steps are:

1. Choosing appropriate sustainability indicators (KPIs)
2. Gathering raw data
3. Data transformation and rescaling

The choice of indicators

The first step to take for the development of this methodology is the adoption of relevant[7] key performance indicators. Finding all the relevant indicators may be extremely difficult and time

[7] As defined in the Problem Formulation chapter.

consuming, thus, for this purpose, I decide to consider the KPI produced by the Global Reporting Initiative for its Reporting Guidelines. The reason of this choice is given by the fact that those parameters have been carefully selected through a long dialogue with numerous stakeholders, which has lead to the production of very strong and share parameters, covering all the main issues of sustainability. The GRI distinguishes between core and additional indicators (see Introduction chapter), and the one considered for this study are the *core* ones. All the core performance indicators reported in the GRI Guidance are 51.
Furthermore the GRI releases some more focused guidelines on different sectors, and, amongst those, also for Food Processing. Thus, the core indicators of the Food Processing Sector Supplement are valid KPI to adopt and add to the general one. The reason for this is that, apart from including the *general* version of the Reporting Guidelines, it includes specific issues that characterize the sector, such as:

- Sourcing practices,
- Community investment,
- Impact of governmental support,
- Labour and management relations,
- Practices that promote healthy and affordable food,
- Customer health and safety,
- Product information, and communication to consumers,
- Animal welfare including breeding and genetic, animal husbandry, and transportation, handling, and slaughter.

(Global Reporting Initiative - GRI, d)

The GRI Guidance, together with the Food Processing Supplement, has indicators for all the three pillars of sustainability (Economic, Environmental, and Social), plus the Sourcing section, and the Social is divided into: Labour Practices and Decent Work, Human Rights, Society, Product Responsibility, and Animal Welfare. Hereafter I am giving a short representation of all the aspects that have at least one core indicator – while in the Appendix A all the core indicators, used as KPIs performances, are fully reported.

Sourcing Performance Indicators:

- Across all Aspects of Sourcing

Economic Performance Indicators:

- Economic Performance
- Market Presence
- Indirect Economic Impacts

Environmental Performance Indicators:

- Materials
- Energy
- Water
- Biodiversity
- Emissions, Effluents, and Waste
- Products and Services

- Compliance

Social Performance Indicators

- Labour Practices and Decent Work:
  - Employment
  - Labour/Management Relations
  - Occupational Health and Safety
  - Training and Education
  - Diversity and Equal Opportunity
  - Equal Retribution for Women and Men

- Labour Practices and Decent Work:
  - Employment
  - Labour/Management Relations
  - Occupational Health and Safety
  - Training and Education
  - Diversity and Equal Opportunity
  - Equal Retribution for Women and Men

- Society Performance Indicators:
  - Community
  - Corruption
  - Public Policy
  - Compliance

- Human Rights Performance Indicators:
  - Investment and Procurement Practices
  - Non-discrimination
  - Freedom of Association and Collective Bargaining
  - Child Labour
  - Forced and Compulsory Labour
  - Assessment
  - Remediation

- Product Responsibility Performance Indicators:
  - Customer Health and Safety
  - Product and Service Labelling
  - Marketing Communications
  - Compliance

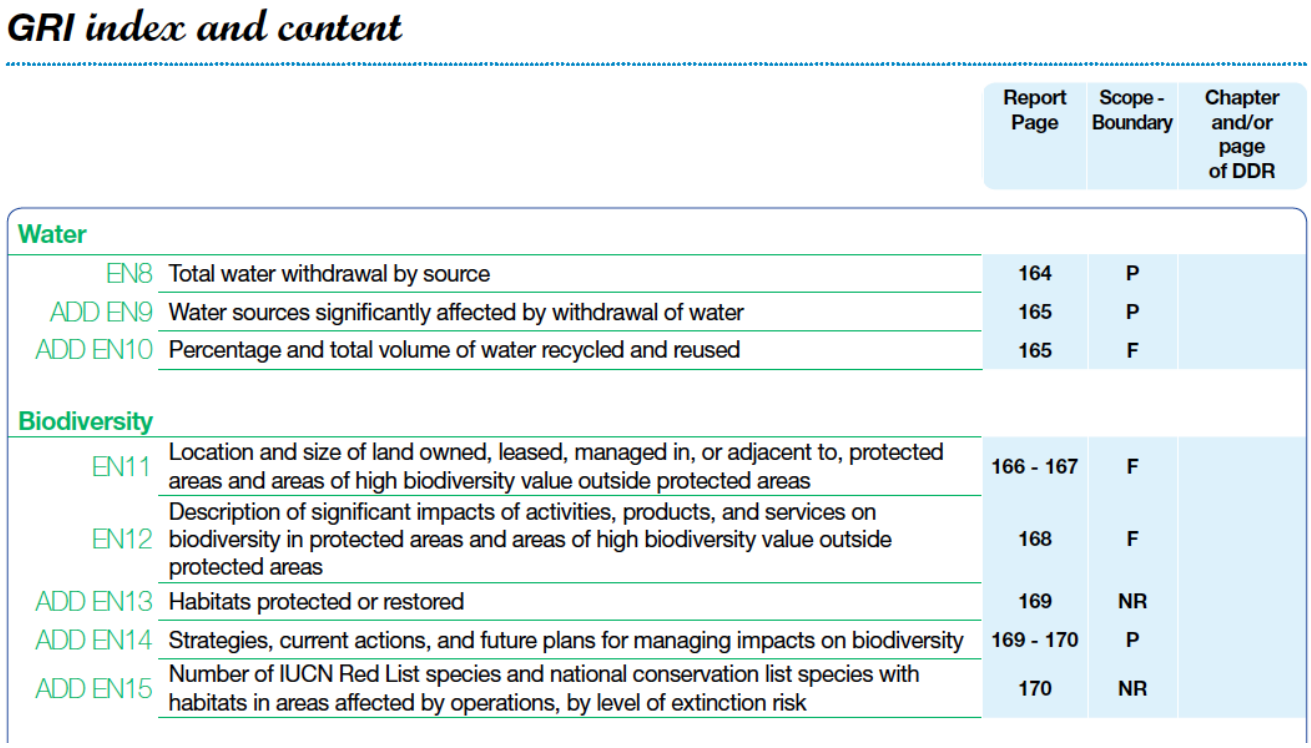
- Animal Welfare Performance Indicators:
  - Breeding and Genetics
  - Animal Husbandry
  - Transportation, Handling, and Slaughter

(Global Reporting Initiative - GRI, e, 2011)

Furthermore, the over listed aspects are the ones that are used for determining the targets of the companies. While the KPI for the activities of the company are determinate by the GRI's core indicators (see Appendix A), the parameters to measure the commitment of the company are given by the aspects just listed for every pillar – since requiring a quantitative target for every core indicators would be unrealistic. Therefore, a company will be assessed on its commitment by the presence of at least one quantitative goal on each aspect listed above – which can be considered as the KPI to measure the commitment.

The collection of data

The data are gathered by publicly released documents, such as the sustainability and annual report. This point is intended to be a strong characteristic of this methodology, since, thanks to the adoption of the GRI indicators, which are methodically reported by 80% of companies' sustainability report worldwide, the collection of the data is relatively fast and precise. Indeed, reporting companies, which are following the GRI framework, have a table, the GRI Index, where they give information on each parameter, and, if writing the information there, are giving the page of where such information is available (see Figure 3). Furthermore in the table is often provided the level of covering such issues, which can be fully, partial, or not available (/not relevant). Thus, it is unnecessary to underline how this method can extremely facilitate the process of gathering information for benchmarking, and turn them into points.
Lastly, the data collected are sometimes already verified by an external actor, in that case the declared class of the GRI report will be followed by a "+". Otherwise a verification by a third party is recommended, even if this methodology is addressed to company poor of resources, those it would be difficult that they would ask for a verification process.



GRI index and content

		Report Page	Scope - Boundary	Chapter and/or page of DDR
Water				
EN8	Total water withdrawal by source	164	P	
ADD EN9	Water sources significantly affected by withdrawal of water	165	P	
ADD EN10	Percentage and total volume of water recycled and reused	165	F	
Biodiversity				
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	166 - 167	F	
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	168	F	
ADD EN13	Habitats protected or restored	169	NR	
ADD EN14	Strategies, current actions, and future plans for managing impacts on biodiversity	169 - 170	P	
ADD EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	170	NR	

Figure 3 – An extraction of the GRI Index, from the Danone Sustainability Report 2010.

Data transformation and rescaling

The normalization of data is a process that always occurs, in a methodology for benchmarking, in order to transform qualitative data into comparable ones. Indicators are therefore allocated on a scale from 0 to 1, including also the half point, ½. The 0 score means that no data are available, or no activities are in place; ½ mean that just a brief, or general mention is given to the issue; while 1 point is given in the case the activity or goal is clearly explained, providing quantitative data (such as the energy saved the last year). This scoring system is the same adopted to measure activities as well as goals. Indeed, to quantify the commitment: 0 indicates the absence of information, ½ goes to a general declaration of taking action, and 1 for the presence of at least a defined goal, which is quantitative and or time-bounded.
A further help may come again by the GRI Reporting Framework, indeed, when a company is filling in the GRI Index, is also declaring the level of cover of that topic (partially, fully, or not reported). But those declarations have to be carefully checked, since the GRI reports are self declared, and not always reviewed by an external party – if they are the class level (A, B, or C) will be followed by a "+".
After that, the general summation of the score is done, reaching a maximum of 110 points, given by 70 core indicators for the activities (51 are the general ones, plus the specific for the Food Industry), plus the 41 aspects used to measure the commitment. Then it is normalized to 100, and this will give the final score communicated at the end.
Hereafter a schematic representation of the proposed tool – Table 2.

Table 2 – Main characteristics of the methodology proposed.

	Focus	Source of Information	KPI & Weighting	Targets
New Methodology	GRI performance indicators of G3.1	Corporate data sources, public information, and third parties	70 KPIs Equal weight	Both goals and general commitment

Outcomes of the methodology

What is coming out of this benchmark tool are mainly two types of results. Firstly, and probably most important, is the fact that all the existing activities and goals of the selected companies can be compared amongst them. This will not necessarily bring to the selection of a best practice, but the aim of doing such benchmark is to provide information on the sustainable initiatives undertaken by other firms, competitors, within sustainability. Furthermore this comparison can lead to reveal the gaps between the assessing company and the competitors – and sometimes to give even the suggestion on how to cover such gaps (Stauffer, 1993). Thus companies will clearly be pushed to improve their performances, and, therefore, their sustainability.
Secondly, for each company analysed by the benchmark tool is possible to calculate a score, between 0 and 100, which is able to provide a quick idea of what is the overall performances of that company, allowing a more easy comparison with the others, and between years.
What as to be clarified is the fact that this is just a score system on sustainability, and reaching 100 does not mean that the sustainability "status" has been reached. There is no judgement on performances and targets, but on their presence.

As it is possible to observe from the methodology here presented, all the weakness of the previously analysed tools have been improved. The three pillars of sustainability are covered, the number of performance indicators adopted is broad enough to cover all the main issues of sustainability, and it is enough comprehensive but still simple tool (thanks to the GRI indicators), lastly, it maintain a good level of objectivity since no expert or feedback questionnaire is required for it.

7. Conclusion

The methodology here presented wants to suggest some possible solutions to the problems that have been pointed out during this study, particularly taking into consideration the ones presented during the Problem Formulation chapter. In addition to those, this methodology is trying to present a valid alternative to some of the weaknesses pointed out in the Analysis chapter from the other benchmark tools.

Benchmarking is a recognized practice to boost companies to compete with each others, and improve their sustainable initiatives and goals. Usually the creation of a new benchmark tool on sustainability is always involving the creation of new KPIs to analyse just the activities undertaken by the companies, or their sustainable performances up to the present. Furthermore, the tool developed by consultancies or academia are often hard to be implemented by a small and medium companies that wants to benchmark its activities within sustainability. Thus the risen issues in this case are mainly three: the choice of proper and shared indicators, the feasibility of implementing the methodology in SMEs (or anyway in companies with limited resources to address on the task), and the inclusion of the expressed targets into the benchmark.
In order to face the just mentioned problems I developed a benchmark tool which is covering all the three dimension of sustainability, and focusing on the food sector. Such methodology is characterized by:

1. The adoption of the **GRI Indicators,** which have been developed together with a broad range of stakeholders, are internationally recognized and widely used for reporting on sustainability; thus, covering all the main issues of sustainability, and the ones which are peculiar of the food sector (see section 1.5).
2. The **feasibility** of the suggested benchmark tool is given by the adoption of the GRI's indicators. Indeed, such indicators, included the additional ones of the food sector, are covering all the main issues of sustainability; therefore they are providing a comprehensive view on the company's sustainability profile. Furthermore, the way of reporting according to the GRI's Framework allows an easy and structured way of collecting the data; thus also a small/medium company with limited resources would be able to collect and manage such a high amount of data.
3. The integration of **targets** into the benchmark tool is probably the peculiarity of the suggested methodology. Indeed, usually benchmark tools are always assessing the current activities and initiative, while there are just a few methodologies to measure targets. Such as underlined by an authoritative research (*Rate the Raters*), there is a need for benchmarking tools which are also considering the important aspect of the companies' commitment within sustainability (SustainAbility, 2011 b).

As these three key points are summarizing, the suggested methodology is able to answer all the issues raised in this study, and thus, to the research question. But, despite this, the same

methodology can be applied to other sectors, adopting just the general GRI's Indicators (or the one of the specific sector if released).

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Appendix – KPI's Indicators

"Everything that can be counted does not necessarily count;…and everything that counts cannot necessarily be counted "
Albert Einstein

Hereafter I listed all the 70 KPIs that are suggested for the methodology of this study. Such parameters are considered core in the GRI G3.1 Guidelines, and are including the core ones that have been released for the *Food Processing Sector Supplement*.
The *Food Processing Sector Supplement* is presenting two new categories of indicators, the Sourcing and Animal Welfare, in addition to those some indicators have been add to the previous categories, and some of them have been integrated (those additional comments have been added at the end of the indicators as further bullet points).
Henceforth they are reported together, integrated, as they are supposed to be used.

The GRI's website is giving clarification for each indicator asked on their guidelines. (Global Reporting Initiative - GRI, f)

Sourcing Indicators:

1. *Across all aspects of sourcing*
    - **FP1** Percentage of purchased volume from suppliers compliant with company's sourcing policy.
    - **FP2** Percentage of purchased volume which is verified as being in accordance with credible, internationally recognized responsible production standards, broken down by standard.

Economic Indicators:

1. *Economic Performance*
    - **EC1** Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.
        - Commentary added to invite reporting on sector-specific community investments.
    - **EC2** Financial implications and other risks and opportunities for the organization's activities due to climate change.
    - **EC3** Coverage of the organization's defined benefit plan obligations.

- **EC4** Significant financial assistance received from government.
    - Commentary added to describe the impact of governmental support in the sector. Reference added.

2. *Market Presence*
    - **EC6** Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.
    - **EC7** Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation.

3. *Indirect Economic Impacts*
    - **EC8** Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.

Environmental Indicators:

1. *Materials*
    - **EN1** Materials used by weight or volume.
        - Commentary added to specify wild caught and farmed seafood and other identified raw materials.
    - **EN2** Percentage of materials used that are recycled input materials.

2. *Energy*
    - **EN3** Direct energy consumption by primary energy source.
    - **EN4** Indirect energy consumption by primary source.

3. *Water*
    - **EN8** Total water withdrawal by source.

4. *Biodiversity*
    - **EN11** Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.
        - Commentaries added to include waters.
    - **EN12** Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.

5. *Emissions, Effluents, and Waste*
    - **EN16** Total direct and indirect greenhouse gas emissions by weight.
    - **EN17** Other relevant indirect greenhouse gas emissions by weight.
    - **EN19** Emissions of ozone-depleting substances by weight.
    - **EN20** NOx, SOx, and other significant air emissions by type and weight.
    - **EN21** Total water discharge by quality and destination.

- **EN22** Total weight of waste by type and disposal method.
- **EN23** Total number and volume of significant spills.

6. *Products and services*
   - **EN26** Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.
   - **EN27** Percentage of products and their packaging materials that are reclaimed by category.

7. *Compliance*
   - **EN28** Monetary value of significant fines and total number of non-monetary sanctions for non compliance with environmental laws and regulations.

Labour practices and decent work Indicators:

1. *Employment*
   - **LA1** Total workforce by employment type, employment contract, and region, broken down by gender.
   - **LA2** Total number and rate of new employee hires and employee turnover by age group, gender, and region.
   - **LA15** Return to work and retention rates after parental leave, by gender.

2. *Labour/Management Relations*
   - **LA4** Percentage of employees covered by collective bargaining agreements.
   - **LA5** Minimum notice period(s) regarding significant operational changes, including whether it is

3. *Occupational Health and Safety*
   - **LA7** Rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender.
   - **LA8** Education, training, counselling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.

4. *Training and Education*
   - **LA10** Average hours of training per year per employee, by gender, and by employee category.

5. *Diversity and Equal Opportunity*
   - **LA13** Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.

6. *Equal remuneration for women and men*
    - **LA14** Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation.

Human rights Indicators:

1. *Investment and Procurement Practices*
    - **HR1** Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening.
    - **HR2** Percentage of significant suppliers, contractors, and other business partners that have undergone human rights screening, and actions taken.
    - **HR3** Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.

2. *Non-discrimination*
    - **HR4** Total number of incidents of discrimination and corrective actions taken.

3. *Freedom of Association and Collective Bargaining*
    - **HR5** Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights.

4. *Child Labour*
    - **HR6** Operations and significant suppliers identified as having significant risk for incidents of child labour, and measures taken to contribute to the effective abolition of child labour.

5. *Forced and Compulsory Labour*
    - **HR7** Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labour, and measures to contribute to the elimination of all forms of forced or compulsory labour.

6. *Assessment*
    - **HR10** Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments.

7. *Remediation*
    - **HR11** Number of grievances related to human rights filed, addressed, and resolved through formal grievance mechanisms.

Society Indicators:

1. *Labour/Management Relations*
   - **FP3** Percentage of working time lost due to industrial disputes, strikes and/or lock-outs, by country.

2. *Healthy and affordable food*
   - **FP4** Nature, scope and effectiveness of any programs and practices (in-kind contributions, volunteer initiatives, knowledge transfer, partnerships and product development) that promote access to healthy lifestyles; the prevention of chronic disease; access to healthy, nutritious and affordable food; and improved welfare for communities in need.

3. *Local Communities*
   - **SO1** Percentage of operations with implemented local community engagement, impact assessments, and development programs.
   - **S09** Operations with significant potential or actual negative impacts on local communities.
   - **SO10** Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.

4. *Corruption*
   - **SO2** Percentage and total number of business units analysed for risks related to corruption.
   - **SO3** Percentage of employees trained in organization's anti-corruption policies and procedures.
   - **SO4** Actions taken in response to incidents of corruption.

5. *Public Policy*
   - **SO5** Public policy positions and participation in public policy development and lobbying.
     - Commentary added to invite reporting on lobbying activities, and their context, related to the subsidized production of key product ingredients.

6. *Compliance*
   - **SO8** Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with laws and regulations.

Product responsibility Indicators:

1. *Customer Health and Safety*
   - **PR1** Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.
     - Commentary added to include the assessment of significant environmental and

social impacts across the life-cycle stages of products and services. Compilation added to report on the procedures, steps and results.

- **PR2** Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.
- **FP5** Percentage of production volume manufactured in sites certified by an independent third party according to internationally recognized food safety management system standards.
- **FP6** Percentage of total sales volume of consumer products, by product category, that are lowered in saturated fat, trans fats, sodium and added sugars.
- **FP7** Percentage of total sales volume of consumer products, by product category, that contain increased nutritious ingredients like fibre, vitamins, minerals, phytochemicals or functional food additives.

2. *Product and Service Labelling*
   - **PR3** Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.
     - Commentary added to describe the importance of social and environmental product information and its communication to consumers. Compilation added to report on the use of logos and the information that does not appear on packaging.
   - **FP8** Policies and practices on communication to consumers about ingredients and nutritional information beyond legal requirements.

3. *Marketing Communications*
   - **PR6** Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.
     - Commentary added to describe the influence of food marketing on dietary habits. Commentary added to specify types of marketing communications. Commentary added to invite reporting on policies and guidelines relating to marketing to vulnerable groups. References added.

4. *Compliance*
   - **PR9** Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services

Animal welfare indicators:

1. *Breading and genetics*
   - **FP9** Percentage and total of animals raised and/or processed, by species and breed type.

2. *Animal Husbandry*
   - **FP10** Policies and practices, by species and breed type, related to physical alterations and the use of anaesthetic.

- **FP11** Percentage and total of animals raised and/or processed, by species and breed type, per housing type.
- **FP12** Policies and practices on antibiotic, anti-inflammatory, hormone, and/or growth promotion treatments, by species and breed type.

3. *Transportation, handing, and slaughter*
   - **FP13** Total number of incidents of non-compliance with laws and regulations, and adherence with voluntary standards related to transportation, handling, and slaughter practices for live terrestrial and aquatic animals.