

Department of Business and Management

Chair of International Business

Environmental Performance Management in Multinational Corporations

Supervisor Candidate

Roberto Dandi Barbara Canepari

Co-supervisor ID 665581

Karynne Turne

Academic Year 2016/2017

Table of Contents

1. Introduction

- 1.1. Business Ethics and Corporate Social Responsibility
- 1.2. Environmental issue in the globalization era
- 1.3. The legal framework: hard and soft laws

2. Corporate Environmental Responsibility in Management literature

- 2.1 Sustainability and triple bottom line
- 2.2 Institutional Theory and Self- regulation
- 2.3 Competitive advantage and the Natural Resource-Based View
- 2.4 The Natural Resource-Based View of the Firm: fifteen years after
- 2.5 Corporate Environmental Management: theoretical framework
- 2.6 Drivers of Environmental Management implementation
- 2.7 A drawback: The Greenwashing Concept

3. Environmental Management in Multinational Companies

- 3.1 International business challenges
 - 3.1.1 Regulatory turbulence and pollution havens
 - 3.1.2 The Global Supply Chain
- 3.2 Cross border Environmental Management: concepts and strategies

4. Environmental Performance Management Tools and Techniques

- 4.1 Environmental Management Systems
- 4.2 ISO series and EMAS
- 4.3 Environmental Audit
- 4.4 Life Cycle Assessment (LCA)
- 4.5 Ecolabelling
- 4.6 Environmental Performance Evaluation and Reporting
- 4.7 Other tools

5. Unilever: a longstanding commitment to sustainability

- 5.1 Company Overview
 - 5.1.1 History
 - 5.1.2 Mission, values and corporate culture
 - 5.1.3 Organizational structure, strategy and performance
 - 5.1.4 Brands and products
- 5.2 Embedding sustainability into corporate strategy
 - 5.2.1 Unilever Sustainable Living Plan (USLP)
- 5.3 Managing the environmental performance
 - 5.3.1 Life Cycle Assessment
 - 5.3.2 Working with suppliers
 - 5.3.3 Working with consumers and employees
- 5.4 The sustainable agriculture goal
 - 5.4.1 Mainstreaming sustainable agriculture practices
 - 5.4.2 Knorr Sustainability Partnership

6. Conclusions

Annexes References

Abstract

1. Introduction

Multinational corporations have emerged as major actors in our economy and international society is becoming increasingly concerned about their impact on the population and the environment. At the same time, it is also true that, by leveraging on their magnitude and global reach, they can exert a catalyst role in driving a shift of business paradigm towards sustainable development. In other words, by choosing to operate according to the environmental responsibility perspective, multinational corporations can reduce or even prevent environmental externalities associated with their economic activity.

Traditionally Corporate Environmental Responsibility (CER) practices and standards have been adopted as legal compliance towards national and international institutions or as an ethical choice linked to Triple Bottom Line framework, which describes the three interconnected variables – economic, social and environmental – needed for a global sustainable development to be included in driving the company's performance.

In the early 90s new streams of research began to consider other factors as drivers of environmental sustainable choices in business, namely the competitive advantage achievement and the role of self-regulation. On one hand, Natural-Resource-Based View Theory claims that, as natural environment affects the external scenario in which companies operate, strategies to pursue competitive advantage should be rooted in those resources and capabilities that facilitate environmentally sustainable economic activity. On the other hand, Institutional Theory looks at the pressures that, by spreading a common set of values and norms, influence companies' choice of voluntary constraining their burden on the planet.

The trend of gradually broadening corporate strategy in order to include principles, systems and practices able to face environmental challenges, has eventually led to consider the environmental performance as a new area of business to be managed.

In the world we live in, environmental sustainability has become an unavoidable choice and we argue that not necessarily business and environment are linked by a negative relationship but, on the contrary, a better management on the overall corporate performance can be a means to protect planet's resources while potentially assuring long-term economic profits and growth.

This chapter is meant to introduce the environmental issue by connecting it to business ethics and the frameworks of corporate social and environmental responsibilities; it concludes with an insight about the international regulative scenario in terms of hard and soft laws. The second chapter examines the most relevant theoretical literature about the interconnection between business and environment to better understand the rationale driving companies to include environmental concerns and problems in their agenda; it also considers the potential drawback of *greenwashing*, namely a marketing strategy aimed at creating a false perception about the environmental-friendly root of brands and products. Afterwards, in chapter 3, we deal with the international aspects of environmental performance management. Firstly, by looking at the main challenges multinational corporations face in operating within different regulatory regimes and in handling a global supply chain; secondly by providing an overview about the possible cross border environmental management strategies that are at companies' disposal.

In order to strategically approach towards environmental externalities linked to business operations, companies can choose to implement different tools and we will analyze the most important ones in chapter 4, also looking at the economic benefits they bring to the overall organization. There are companies that choose to coordinate many tools in a unique and structured framework known as Environmental Management System (EMS) and others that prefer to rely on some techniques separately. Regardless the strategy corporations undertake, they can follow guidelines formally established by international agencies and being certified against globally recognized standards; we will focus on ISO

14000 standards series and the Eco-management and Audit Scheme (EMAS) issued within the European Union.

Chapter 5 is addressed to the Unilever case, a giant in the consumer goods industry which turned sustainability, social and environmental, into its corporate strategy. The ability of adopting profitable but responsible business practices enables the company to effectively pursue an outstanding economic performance while reducing its environmental footprint and improving the social impact of its products. By analyzing in depth Unilever Sustainable Living Plan, a blueprint for sustainable growth launched in 2010, we will acknowledge the extremely important role that multinational companies might exert in positively impact the planet and the people living on it while still thriving economically.

1.1 Business ethics and Corporate Social Responsibility

Business ethics deals with the ethical principles and moral or ethical problems that arise in a business environment.

It studies business situations, activities and decisions a firm has to face in order to decide whether something is right or wrong.

It applies to all aspects of business and considers the ethical relationship between business and consumers and between business and their employees. This means that business ethics covers the hole spectrum of interactions between firms, individuals, society and the state.

"Some specialists consider that business ethics begins where the law ends".

This means, firstly, that business ethics is concerned with issues not covered by laws, and, secondly that it is a very arbitrary topic. Transnational corporations, or companies with international activities may be ethical in their own countries but unethical in foreign ones. This may lead to corruption in order to obtain

3

¹ Andreea-Daniela Gangone, *Ethical Issues in International Business*, available at http://epublications.bond.edu.au/cgej

governmental facilities, disrespect for the human life, use of underage employees, waste of natural resources, pollution etc.

Business ethics creates a dilemma for the managers as being ethically correct leads, on a short term, to more problems than benefits, but it brings various benefits in the long term.

Many multinational companies are tempted to ignore or violate the principles of business ethics, in order to gain more and to gain faster but practice has demonstrated that the costs the company must endure in case unethical behaviours are revealed to the public, are higher than the costs required avoiding them².

In fact, consumers are becoming more and more important in the global economy and their voice is as powerful as the one of the shareholders.

Corporate Social Responsibility (CSR) is, as Lord Holme and Richard Watts define it, "the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large".

This means, that companies cannot only focus on profits, but they have to face other challenges.

Corporate Social Responsibility (CSR) "can be defined as the economic, legal, ethical and discretionary expectations that the society has of organizations at a given point in time".

If business ethics focuses on the moral judgement and behaviour of individuals and groups within organizations, CSR is about building sustainable businesses.

The main goal of CSR is to create a company that can conduct business in an ethical manner, and that such business has society's best interest in mind.

Debates over CSR have taken place everywhere, between CSR activists and free trade advocates. Activists think that there has to be a higher purpose to corporate existence, and they ask corporations to adopt socially responsible

³Goran Milovanovic, Nada Barac, Aleksandra Andjelkovic, *Corporate Social Responsability in the Globalization Era*; available at http://facta.junis.ni.ac.rs/eao/eao200902/eao200902-01.pdf

² Ibidem

⁴ Ibidem.

policies on, for example, labor, environment, and human rights. By free trade advocates CSR is just to maximize the profits. Today's managers have to be interested in the reputation of the company they lead. This means, they have to respond to the concerns of a variety of stakeholders (shareholder, employees, business partners, creditors, consumers, the media, the environment and the broader community in which the company operates)⁵.

Many companies have a formal statement or code of ethics that summarizes corporate values, because one thing is crystal clear in the current market: CSR is not a choice anymore, it is no longer optional. Public opinion plays an important role at this point in time, in fact during the last decade, some multinational companies were greatly criticized for their behaviour in global market.

Generally speaking, one of the duties of a company which follows CSR is to look after the environment. Since the World Commission on Environment and Development Report of 1987 (Brundtland Report) was published, people have been dealing with questions of "how and why corporations should incorporate environmental concerns into their own strategic decision making".

Specifically, Corporate Environmental Responsibility (CER) is defined as "the duty to cover the environmental implications of the company's operations, products and facilities; eliminate waste and emissions; maximize the efficiency and productivity of its resources; and minimize practices that might adversely affect the enjoyment of the country's resources by future generations"⁷.

In the world we are living in, companies are frequently judged on the basis of their environmental stewardship. Internet, the media and the public opinion play a key role in this matter. Consumers want to know what is inside a company, too. This means that corporate social and environmental responsibility is no longer a luxury but a requirement.

⁵ Kim Kercher, *Corporate Social Responsibility – Impact of Globalization and International Business*; available at http://facta.junis.ni.ac.rs/eao/eao200902/eao200902-01.pdf

⁶ Piotr Mazurkiewicz, *Corporate Environmental Responsibility: Is a common CSR frame work possible?*"; available at http://facta.junis.ni.ac.rs/eao/eao200902/eao200902-01.pdf

⁷ Ibidem.

"A lot of companies have discovered concrete value and competitive advantages from taking environmental initiatives". They have found out that CSR has had a positive impact of the profits, and environmental initiatives have produced, so far, the largest "amount of quantifiable data linking proactive companies with positive financial results".

The key contributions that companies can make to undertake environmental issues are:

- Reducing the use of energy
- Reducing the use of raw materials
- Limit the emissions from production processes
- Limit the waste from production processes

As we will analyse in Chapter III, "many multinationals are adopting environmental policies and practices that extend through their supply chains in the form of requirements for suppliers to adhere to sustainability certifications"¹⁰.

1.2 Environmental issue in the globalization era

Globalization has been developing for more than a century and it involves economic, social and political changes. Communications, social interactions and the organization of markets and production reach beyond the national borders. Globalization was also made possible by advances in telecommunications, transportation and computerization. This process has made the nations more and more interdependent. "This interdependence has economic, environmental and social dimensions"¹¹.

_

⁸ Ibidem.

⁹ Ibidem.

¹⁰ Ibidem.

¹¹ Robert Paehlke, *Globalization, Interdependence and Sustainability*; Paper retrieved on https://www.eolss.net/outlinecomponents/Introduction-Sustainable-Development.aspx

We are going to focus our attention on the Environmental Interdependence. Most of our environmental concerns are local in nature, for example a factory that might pollute a river. However, in this century, we have understood that many of the most significant environmental problems are global in nature. Acidic depositions and many other forms of pollution cross national borders, climate warming and the ozone depletion in the upper atmosphere are also global problems. Some aspects of environmental interdependence have always been present (as in case of migratory animals), but today it is far more widespread and complex (the atmospheric releases from Chernobyl). In some cases, these problems have been developing for centuries but, unfortunately, technological advances and globalization have accelerated the process, that is why many environmental problems are now international. Nations are no longer able to deal with these problems alone. These issues can only be resolved at a higher jurisdictional level¹².

All businesses impact on the environment. They produce waste and emit pollution. That is why businesses are encouraged to improve their approach to environmental issues.

First and foremost, businesses are under pressure from internal and external stakeholders (e.g. employees and managers being the internal stakeholders, and government, customers, suppliers, and society being the external ones), moreover they are subjected to the public opinion of the community they operate in, of the media and the pressure groups (NGOs). Last, but not least they must submit to the laws concerning the environment.

These are some of the reasons why companies should adopt principles of environmental sustainability.

The negative image that comes from an unethical behaviour is stronger than the gain the company could make¹³, and "one of the main benefits for a

-

¹² Ibidem.

¹³ See A. Gangone.

business of behaving ethically¹⁴" and environmentally responsible "is that a better image is given to the world¹⁵" which results in greater profits.

As we said before, companies (some more than others) impact on the environment, even if they aren't the only ones that threaten it.

There are five environmental issues of global significance we think are strictly connected to business externalities: Global Warming, Loss of Biodiversity, Land Degradation, Water Pollution and Deforestation.

• Global Warming

Before the Industrial Revolution all climate changes happened naturally because human activities released very few gases in the atmosphere. After the Industrial Revolution, however, the natural composition of gases got affected due to fossil fuel combustion, deforestation and changing agricultural practices.

• Loss of Biodiversity

Biodiversity boosts ecosystem productivity because each species, no matter how small, have an important role and it is this combination that enables the ecosystem to possess the ability to prevent and recover from a disaster. One of the most important goals is habitat conservation, since human activity has and still is threatening natural habitats through logging, hunting, land-use change for agriculture, infrastructure development or human settlement.

• Land Degradation

Improper soil use, haphazard waste disposal, large-scale deforestation are just some of the problems human activities have caused to the earth.

Water Pollution

Water pollution is a concern for two main reasons. The most important one is the potential for serious health problems, the other main reason is the effect of

8

 $^{^{14}}$ 15 Environmental and Business Ethics; available at: https://s3.amazonaws.com/berkley-center/080604MayledEnvironmentalandBusinessEthics.pdf .

¹⁵ Ibidem.

water pollution on the productivity of water-based economic activities (irrigation and fisheries). Moreover, every year billions and billions of pounds of sewage, sludge and garbage are dumped in the oceans. For many years even chemicals were dumped into water without concern. The problem of water pollution affects every nation around the world.

Deforestation

Forest conservation and the impact of deforestation are worldwide concerns. The deforestation of forests, particularly rainforests, is a major global problem. Deforestation is linked to other serious environmental issues: loss of biodiversity due to the animal's habitat change; variable environmental conditions, such as susceptibility to floods, aggravated draught and soil erosion.

1.3 The legal framework: hard and soft laws

When we talk about environmental regulations we have to divide them between binding hard laws and nonbinding soft laws.

Hard laws are all the rules and laws that are issued by governments and are therefore mandatory. What we are interested to discuss here are nonbinding soft laws. Soft laws were created as a response in order to protect the environment in the absence of a hard law. Soft laws can be nonbinding agreements, statements, declarations, resolutions and recommendations. These agreements are usually negotiated among states on an international level but they "are not legally binding and are discretionary in nature¹⁶". Soft law is a highly controversial subject in international law because, even if it doesn't have legal force in the traditional sense, it still has got a great influence. On

9

-

¹⁶ K. Russell Lamotte, *Mechanisms for Global Agreements*, chapter 48 in International Environmental Laws – The pratitioner's Guide to the Laws of the Planet; available at: http://www.bdlaw.com/assets/attachments/418.pdf

one hand, soft laws are sometimes a first step to a hard law, they "can 'harden' over time into actual legal commitments¹⁷". On the other hand, complying with them is becoming an essential requirement to compete on the market.

Among these guidance documents, the Agenda 21 plan of action adopted at the 1992 U.N. Conference on Environment and Development (Rio Earth Summit) is the most prominent. The plan contains a series of nonbinding chapters on key topics such as transboundary air pollution, biodiversity, biotechnology and resources depletion, aimed at raising awareness among political and business leaders about environmental global issues. Countries' commitment to such issues can be eventually translated into mandatory treaties that regulate businesses economic activity. An example is the United Nations Environment Programme (UNEP) that, by working in partnership with governments and multinational companies, issued legally binding instruments, constraining environmental externalities linked to firms' operations, such as the Minimata Convention on Mercury and the Montreal Protocol on Greenhouse Gases. United Nations, in fact, has been at the forefront in the development of principles and goals that can lead our society towards a sustainable development. At the end of the 1990s through the Global Compact and more recently through the Sustainable Development Goals (SDGs), companies worldwide are encouraged to work together in finding sustainable solutions of doing business in harmony with the planet and the people living in it.

By the same token, are the Organization for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises which recommend businesses to give proper attention to environmental issues and responsible business conduct. The mission of OECD is to promote policies that aim to enhance the economic and social well being of people all around the world. It works with governments to share experiences and search solutions to common problems. "The Environmental Chapter of the Guidelines encourages multinational enterprises to raise their environmental performance by improving internal environmental management practices and seeking

¹⁷ Duncan French, *International Guidelines and Principles*, CONVENTIONS, TREATIES AND OTHER RESPONSES TO GLOBAL ISSUES – Vol. I Encyclopedia of Life Support Systems (EOLSS).

continuous environmental improvements"¹⁸. The central principle of the Guidelines is that enterprises should act as soon as possible to avoid grave or irreversible environmental damages resulting from their activities. Risk analysis plays an important role in the decision-making process and it is an essential part of companies' business. Risk analysis is made up of three components: risk assessment, risk management and risk communication. A large variety of tools are available to put these in practise including environmental impact assessment, environmental management systems, life-cycle assessment, environmental audits and corporate reporting.

The ISO 14000 series about environmental performance management, developed by the International Organization for Standardization (ISO) in the early 1990s, has risen to be the dominant voluntary code of industry environmental conduct at an international level. ISO 14001 (Environmental Management System) is the most important standard concerning environment, and in a few short years it has gained wide recognition and acceptance among the business world, thanks to its international scope. Firms all around the world have begun to adopt these standards and nowadays, even if it is not a hard law, it has become a *de facto* condition for conducting business in the global market place, particularly in certain regions and sectors.

As we have discussed above, globalization brought to light many environmental-related problems. These issues are, nowadays, one of the main concerns of various international organizations' agendas. Globalization and industrialization are directly responsible of the disruption of environment although in the last decades firms have put the protection of environment at the center of their business' programs in order to develop sustainable business policies. Multinationals, for instance, have the power to change the way environment is treated by business, and they did change their policies, thanks to the adoption of CSR

¹⁸ The OECD Environment Programme retrieved on https://www.oecd.org/env/38135367.pdf.

and CER approach. Certainly, as said before, companies are not driven only by ethical interests, but concern for the environment is becoming a key factor since many soft laws are turning into hard ones: just think of engines emissions rules which are binding in all developed countries.

At the same time companies succeeding to lead their business according to environmental criteria will have obtained a big competitive advantage, potentially assuring a long-term growth. On the other side, the failure to update to these policies may result in the forced emigration to developing countries if not the complete putout from the market.

Although the entire international community spins around sustainable development goals, legal framework is still fragmented; in fact it is difficult to align the needs and interests of companies operating in different countries as well as interests of the countries themselves. Globally speaking, there are still significant differences between developed countries and developing ones who are demanding the rights to manufacture with few restrictions, allowing them to fill up the gap that separates them from developed countries.

2. Corporate Environmental Responsibility in Management literature

2.1 Sustainability and the triple bottom line

Over the past few decades the planet has witnessed many environmental disasters as widely explained in Chapter 1. These events, have risen global concerns about the extent of corporations' impact on environment throughout their business performance and have eventually shaped companies culture with environmental-friendly goals and values. The growing attention to and pressure for environmental protection have pushed industries and firms to adopt a wide range of new organizational approaches, measures and technologies aimed at reducing and controlling pollution levels and improving their ecological efficiency.

Many companies, hence, started to embrace principles and practices of environmental sustainability driven by ethical considerations with the aim of positively affect the society. Lyon and Maxwell define CER as "environmentally friendly actions not required by law, also referred to as going beyond compliance, the private provision of public goods, or voluntarily internalizing externalities".¹⁹.

Nevertheless, the authors underline the dual identity of CER, breaking down the concept into altruistic CER determined solely by moral concerns and strategic CER hiding economic purposes.

It seems clear and not blameworthy that, beyond the business ethics perspective, including environmental issues in the company's mission may

¹⁹ Stephan Schmidheiny with Business Council for Sustainable Development (1992), *Changing Course: A Global Perspective on Development and the Environment.*

provide some strategic advantages such as maximizing profit and enhancing the reputation.

Buyers, consumers, investors and employees increasingly care about the whole impact of corporations on the planet they live in by assessing their capacity of simultaneously integrating ecological goals, social goals and financial ones, yet measuring those different layers can be difficult.

During the mid-1990s researchers and practitioners have developed a number of approaches toward corporate environmental and social responsibility. Probably the more sophisticated and better known framework to reduce the ecological damage and offering measurement tools in support of managers' decision making is the Triple Bottom Line.

John Elkington developed this accounting approach, also called 3 Ps – Profit, People, Planet – able to measure the three dimensions of a business performance giving voice to the need and desire of undertaking a sustainable development. The Triple Bottom Line thinking adds to the traditional Bottom Line measuring profit and shareholders value, social evaluations about People – part of the organization and affected by it – and environmental analysis about the impact on the Planet – alongside the whole supply chain – with the purpose of finding a balance between them.

Although there is no universal standard method to measures the 3 Ps – as some academics monetize the dimensions with the dollar unit and others use to build up an index – and the dimensions can be adapted according to different entities and geographical scope of a company, a traditional framework is shown by

figure 1.



Figure 1

This approach has been both criticized and promoted. For sure it had the important role of raising the awareness among people, business and governments about the need of taking into account and balance the net economic, social and ecological value created (or destroy). In fact, "a growing number of multinational companies have adopted the approach, acknowledging the increasing attention of different stakeholders toward the environmental and social impacts of their daily decisions, and recognizing the importance of conforming to changing social norms and of voluntarily contributing to the community in which they operate in a transparent manner "20". Global corporations such as Procter and Gamble and General Electric measure their sustainability using the TBL concept and Cascade Engineering, a leading provider of engineered plastic systems and components, yearly produces a TBL scorecard with the three different report available on its web-site.

2.2 Institutional Theory and Self-regulation

Along with the development of a widespread awareness about environmental effects of business performance and the need of sustainability in management model, regulations and standards were globally set up by corporations and associations as a mean to tie a reckless growth while gaining external legitimacy.

Beyond mandatory external regulation created by policies and norms at a governmental level, it is interested, and management literature focused on it, to investigate self-regulation to understand how and why firms voluntary abide by such rules.

Institutional theory offers insights for further understanding the origin and power of self-regulation as it studies "the process by which activities or items

Changing Course: A Global Perspective on Development and the Environment

²⁰ Stephan Schmidheiny with Business Council for Sustainable Development (1992),

become institutionalized or embedded in institutions as norms and accepted practice and the role of institutions in society"²¹. Institutions obtain power by becoming institutionalized in social settings and by constraining the strategic behavior of an agent as a result of different external pressures that create and diffuse a common set of values, norms, and rules to eventually produce similar practices and structures across organizations. The theory identifies three main pressures and several actors directly influencing the voluntary creation of values and the adoption of norms and rules assumed to be and expected to be the correct ones. *Normative* and *coercive* pressures exerted by governments, non-governments organizations and community groups continually impose demands on managers. On one hand, governmental bodies and regulatory agencies promulgate legislation and enforce it with the fear of legal (coercive) sanctions. On the other hand, activists, environmental organizations and trade associations also call for the implementation of more extensive environmental practices and standards. The increased awareness on environmental issues via the widespread availability of information and the shift towards more demanding corporate culture change the set of norms and expectations about what constitutes appropriate and legitimate organizational behaviors regarding environmental management field. As environmental-friendly conducts start to be taken for granted by social and market actors, firms comply with those external requirements to gain the external legitimacy that ensure them the access to resources needed for a long-term sustainability. Mimetic pressure comes from the imitation of best practices and codes of conducts earlier adopted by leading companies as a consequence of shared belief system or to fulfill customer requirements.

Institutional theory assumes that the presence of such external factors will produce similar responses across all affected organizations. However, organizations will respond to external pressures in varied ways based on their access to resources, their development of internal capabilities as well as according to political and cultural context. Nevertheless, it is also true that in

²¹ W. Richard Scott, 2003, *Institutional Theory: Contributing to a Theoretical Research Program*, Oxford Press University

studying self-regulative institutions, several authors found a correspondence between their implementation and pressure from local stakeholders, civil society, customers and government. For instance, "regulatory, normative and cognitive aspects of a country's institutional environment greatly impact the costs and potential benefits of the ISO 14001 standard and therefore explain the differences in adoption across countries"²².

Others researches of business and environment scholars, argue that the adoption and functioning of institutions (both external and self-regulative) are shaped by strategic actions. In other words, they represent nothing more than the outcome of strategic interactions aimed at achieving increased profit and efficiency by taking advantage from other companies' behaviors and decisions. The choice of embracing environmental responsibility programmes or voluntary set up codes of conduct is driven by the own-self interest. On one hand, companies are able to successfully diversify themselves from those not environmental friendly within the same industry while avoiding risk of sanctions. On the other hand, standards and certifications allows them to communicate hidden environmental attributes of a good or service to customers while avoiding asymmetric and deceiving information.

Whether self-regulative structures arise as a consequence of one or more external pressures or underpin by an opportunistic rationale, many scholars stressed the importance of monitoring and sanctions as *sine qua non conditions* to allow an effective implementation. Environmental programs and systems that include strong sanctions or are enforced by governmental oversight as well as third party standard certification reveal to be more effective while avoiding the risk of moral hazard. In fact, scholars that compare many self-regulatory programs argue that the more successful ones exhibit internal sanctioning mechanisms to prevent free riding and to incentive pro environment practices.

The role of third party organizations and environmental agencies is aimed to increase transparency and credibility of firms, though it remains difficult to tell which companies are truly green because they may choose which information

²² Luca Berchicci, Andrew King, 2007, *Postcards from the Edge: a Review of the Business and Environmental Literature*, Erasmus Research Institute Of Management;

to disclose and which set of standard to comply considering that there is no international governing body to enforce the same law consistently.

2.3 Competitive advantage and The Natural-Resource-Based View

In the middle of the 90s a new stream literature, studying the connections between business and environment, started address the question whether or not firms can perform and compete more successfully by protecting the environment, better structuring the hypothesis of self-regulate environmental performance as a strategic decision.

In other words, could the adoption of green practices and principles be considered as a strategic source of competitive advantage?

Such a question might have been ignored, were it not for its endorsement by two notable theoretical foundations. First, in a path breaking article, Michael Porter and Claus Van der Linde proposed that firms are "systematically miss profit opportunities by using too many environmental resources or by ignoring ways to reduce firm's waste"²³. Then, secondly, this provocative argument, stimulated scholars linked to the Resource Based View to expand it with environmental considerations. According to the traditional theory, a firm achieves its competitive advantage by developing capabilities based on resources that are rare, not- substitutable, firm-specific and by appropriately matching "distinctive internal organizational capabilities and continually changing external conditions"²⁴

_

²³ Porter & Van der Linde, 1995, *Toward a New Conception of the Environment-Competitiveness Relationship*, The Journal of Economic Perspectives, American Economic Association

²⁴ Stuart L. Hart, 1995, *A Natural-Resource-Based View of the Firm*, Academy of Management Review, University of Michigan

The Natural Resource Based View (NRBV), adds that those resources, upon which internal capabilities are developed, should be intended as linked with the environmental performance of the company. Like the Porter hypothesis, NRBV suggests that as many firms repeatedly invested too little in environmental strategies, at the current state of the art, companies integrating environmental issues and concerns in their strategic decision-making as well as focusing on pro-environment resources are more likely to develop valuable and rarer organizational capabilities allowing them to pursuit a competitive advantage. In simpler words, the firm competitive advantage would be rooted in those capabilities allowing it to better manage its environmental performance and enhancing a sustainable economic activity.

The conceptual framework underpinning this theory proposed by Hart in 1995 describes three main interconnected strategies allowing companies to successfully face environmental challenges: pollution prevention, product stewardship and sustainable development. The significant driving forces behind each of these are briefly analyzed as follow and summarized in table 1.

Pollution Prevention. During the past decades there has been a huge pressure for firms to minimize their emissions and waste from their operations. Managers acknowledgement that pollution mainly stems from inefficient use of material and resources led them to fundamentally rethink the approach of doing business. Pollution abatement can be achieved through two primary means: (i) control and (ii) prevention of effluents, emissions and waste. Thank to continuous improvements in business operations as well as extensive employee involvement, pollution can be reduced or even prevented through better housekeeping, material substitution, recycling or processes innovation rather than relying on expensive "end of the pipe" pollution control technology. Such a precautionary approach enables companies to realize significant savings, resulting in a cost advantage relative to competitors. It may also eventually increase productivity and efficiency: "less waste means better utilization of

inputs, resulting in lower costs for raw materials and waste disposal"²⁵. Furthermore, evidence suggests that, by preventing pollution, firms are potentially able to cut their emissions far below required thresholds, reducing the compliance and liability costs.

Product stewardship. As activities at every step of the value chain show environmental impacts, product processes and design must be re-shaped to minimize life-cycle environmental costs and impact of the product system, from the raw material selection to the packaging process.

However, because the market for "green" products is seldom large competitive advantage might best be secured through competitive pre-emption by means of (i) preferred or exclusive access to important but limited resources or (ii) by establishing rules and standards uniquely tailored to the firm's capabilities acting as barriers to entry the market. By acting as first movers, as it usually occurs for many corporate strategies and not only in the management of environmental performance, companies gain advantage over their competitors. Thus, through competitive pioneering actions, product stewardship can create a base upon which firm operate as an early mover in green product domains while enhancing its reputation.

Sustainable development. Since the publication of the Brundtland Report in 1987, as well as the United Nations' Rio conference in 1992, the term "sustainable development" has come to be associated primarily with balancing economic development with environmental preservation. Thus, the sustainable development strategy is the overarching framework which should foster firms' commitment and effort "to sever negative links between environment and economic activity worldwide"²⁶. It is the overall corporate mission shaping future investments and operations able to take into account social and environmental issues in the interest of firms and the world: poverty,

²⁵ Stuart L. Hart, 1995, A Natural-Resource-Based View of the Firm, Academy of Management Review, University of Michigan

²⁶ Stuart L. Hart, 1995, A Natural-Resource-Based View of the Firm, Academy of Management Review, University of Michigan.

desertification, resources depletion, loss of biodiversity, social and political disintegration.

Sustainable development strategy is a macro balance between material consumption and environmental degradation, competing for new markets and ensuring ecosystem integrity, developing a global leadership and investing in sustainable low-impact technologies and products.

Table 1

Strategic Capability	Environmental Driving Force	Key Resource	Competitive Advantage
Pollution Prevention	Minimize emissions, effluents, & waste	Continuous improvement	Lower costs
Product Stewardship	Minimize life-cycle cost of products	Stakeholder integration	Preempt competitors
Sustainable Development	Minimize environmental burden of firm growth and development	Shared vision	Future position

Source: Stuart L. Hart, 1995, *A Natural-Resource-Based View of the Firm*, Academy of Management Review, University of Michigan.

2.4 The Natural Resource-Based View of the Firm: fifteen years after

In the 15 years since the introduction of the NRBV, empirical researches have tested a number of Hart's proposition in order to assess "whether and under which circumstances, improving environmental performance is beneficial or detrimental to short-term financial performance". Meanwhile, other authors broaden the Resource Based Theory with the dynamic capabilities perspective which emphasizes the need for firms "to integrate, build and reconfigure internal and external competences to address rapidly changing markets".

²⁷ Hart Stuart L., Dowell Glen, 2011, *A Natural-Resource-Based View of the Firm: Fifteen Years After*, Journal of Management, Cornell University.

²⁸ Hart Stuart L., Dowell Glen, 2011, *A Natural-Resource-Based View of the Firm: Fifteen Years After*, Journal of Management, Cornell University.

In 2011 Hart himself reviewed its theory, on the one hand by analyzing the developments made within the domain of environmental proactive strategies; on the other hand, by embracing the emerging perspective of dynamic capabilities to strengthen the linkage between environmental actions and competitive advantage.

Most of the applications of the NRBV have focused on the pollution prevention strategy and have eventually identified two types of factors affecting the firm's capacity to gain financial benefits from its implementation, namely organizational capabilities and managerial cognition.

The former factor suggests that, as resources may not create a yield in isolation, likewise commitment to pollution prevention is unlikely to provide profit by itself, but in combination with more general company's capabilities related to innovation and new competences development. Bundled resources along with investments in environmental capabilities create complexity which requires a proper organizational configuration to convey a competitive advantage.

Managerial acknowledgement and attention of environmental issues have also been recognized as affecting the degree to which firms profit through pollution prevention strategy. In fact, King and Lenox in a 2002 article clearly claim that it depends on managers' expectations to find profitable opportunities in adopting environmentally proactive strategies the ability to effectively gain from pollution prevention. In other words, companies undertake such strategies as long as environmental management is perceived as a strategy maximizing the overall company's value and not as "a separate or even opposing goal". Furthermore, managers' and employee's awareness about their actual and potential impact on the planet enables firms to better manage the adoption of environmentally sound initiatives, such as waste reduction and energy conservation programmes.

Stakeholders integration was also found to play a key role in a firm's ability to develop competitive advantage from product stewardship strategy. In fact,

_

²⁹ Hart Stuart L., Dowell Glen, 2011, *A Natural-Resource-Based View of the Firm: Fifteen Years After*, Journal of Management, Cornell University.

being product stewardship the extension of environmental stances to all the product life-cycle, it requires cross functional coordination and top management support.

The major evolution of the NRBV has been tracked in the separation of the sustainable development strategy in two distinct areas: clean technology and base of the pyramid.

In order to meet the challenge of global sustainability, on one hand, firms should focus on innovative technologies that provide for human needs without depleting the planet resources; future position for competitive advantage stems from firms' ability "to reduce material and energy consumption in developed markets while building markets in the developing countries" through a disruptive change. On the other hand, a focus should be placed on alleviating poverty of the poorest of the world' citizens, namely the ones that are at the base of the pyramid. There is a lack of academic research on how corporations can meet the needs of the poor; many studies suggest that competitive and institutional pressures lead organizations to look for opportunities in such countries whereby developing sustainable businesses in conjunction with local communities might ensure poor people livelihood while guaranteeing a long-term growth for companies.

According to Hart, proactive environmental strategies links to the definition of a dynamic capability. In fact, as natural environment constraints threaten existing resources and ways of doing business, companies must invest in dynamic capabilities to reconfigure the dominant logic of achieving competitive advantage according to environmental management strategies.

_

³⁰ Hart Stuart L., Dowell Glen, 2011, *A Natural-Resource-Based View of the Firm: Fifteen Years After*, Journal of Management, Cornell University.

2.5 Corporate Environmental Management: theoretical framework

Corporate strategy has been driven by different forces in the past, by production pressures, personnel pressures, and more lately by information pressures. The mid-80s sustainable development concept exacerbated clear signs that in next decades it would be driven by environmental pressures. Ethical and environmental concerns of major stakeholders, the belief that it might pay to be green as well as the change of competitive forces drawing an industry profitability due to a sort of green revolution, have led companies to progressively broaden their corporate strategy up to include principles, systems and practices able to tackle environmental-related problems. As already explained since the 90s, scholars started to analyze companies' response to environmental issues looking at their attempts and efforts to increase their environmental responsibility up to drawn different behaviors and approaches that may define a new field in business management. The most relevant are described in the next part of the section to eventually try to define what environmental management is and which are its outcomes and challenges.

Simpson and Steger's conceptual models categorizes companies' response to environmental pressures into four groups: the "Why me" or indifferent, the "Smart movers" or offensive and the "Enthusiasts" or innovative. The first category of companies refers to those that having low environmental risks and even less environmentally-based opportunities, are not committed in managing their environmental performance and ignore the issue altogether though they might be forced to do the minimum that is required by law. "Smart Movers" companies are the ones that having considerable potential for exploiting environmentally related market opportunities as well as high environmental risks, cannot afford to ignore environmental issues and, in fact, go beyond legislation to gain further returns. The latest group includes those firms that, assuming environmental management as a good management model to achieve competitive advantage, integrate environmental management principles and techniques into the entire corporate strategy.

Another stream of research, in classifying companies approach toward environment in an ascending order, develops an environmental performance scale which has become known as ROAST, an acronym representing five possible stages: Resistance, Observe & Comply, Accommodate, Seize & Preempt, Transcendent. It is argued that an organization's performance lies somewhere in between the two extremes of resistant company and transcendent one. The main features of the ROAST scale are summarized in Table 2.

Table 2

Resistance	Total resistance to include environmental issues and values in the strategic decision making; Unresponsiveness to environmental initiatives.
Observe & Comply	Observance and compliance are forced by legislation but actions reflect an unwilling attitude or lack of ability to face environmental issues.
Accommodate	There are earlier indications of voluntary pro-environment behaviors that go beyond basic law compliance.
Seize & Preempt	Actions and goals are voluntary sized according to environmental concerns. Company agenda takes into account the environmental performance management
Transcendent	Organization's values, attitudes, culture and strategy exhibit a total support for the environment, acting in a way that is fully consistent with sustainable development.

Source: Welford Richard, 1999, Corporate Environmental Management: Systems and Strategies, Earthscan Publications.

The overall theoretical framework briefly discussed above, should clarify that environmental management intended as new field of business management requires a proactive approach toward environment that goes well beyond legislation compliance of principles and standards set at international level. In other words, it should be handled as another strategic decision-making area for gaining an edge over competitors by incorporating environmental issues and evaluating the environmental impact of all business activities with the great purpose of balancing economic return and sustainability. Hence, companies realizing that "green issues are not a passing fad" should gradually re-shape their entire corporate strategy starting from analyzing the internal and external implications of environmental-friendly approach, namely new costs and opportunities to be faced. In fact, on one hand, it might result a costly shift – to change the organizational culture and design, to improve or even change existing manufacturing processes or to involve stakeholders and train employees – but on the other hand, practical evidence shows it finally pays to be green. As clearly stated by the Cirano Center of Research and Analysis on Organizations, it is possible to potentially offset the high effort of integrating environmental concerns into the management structure with higher returns in terms of:

- Costs savings alongside the value chain associated with energy, materials and waste reduction as well as low regulatory costs;
- Improving the overall image or reputation of the company, and hence increase customer loyalty or support sales efforts;
- Facilitating access to new niche markets by differentiating the offer with green products and services.

³¹ Currin Emma, 2011, Businesses Going Green: An Analysis of the Factors that Motivate Firms to Adopt Environmentally Friendly Practices, Coastal Carolina University Press;

2.6 Drivers of Environmental Management implementation

According to the stakeholder theory³², a corporation has an impact onto and is impacted by a wide range of institutions and group of people – internally and externally to the organization. Pressures on companies to implement environmental friendly practices and to carefully manage their environmental performance proceed, indeed, by all of them and the main ones are briefly described in the current section.

Employees. A recent survey on US graduates "found that many of them are willing to accept lower salaries from firms engaged in environmentally and socially responsible activities" In other words, a key factor in company's attractiveness and capacity to acquire new talent stem from its commitment to social and environmental issues. Increasingly, employees' concern about the environmental performance of a company go far beyond the operations' impact on their working and living conditions, as they look forward ethical and responsible companies. Therefore, the ones able to broadly adopt environmental friendly practices will find it easier to attract, retain and motivate their employees.

Investors. The expectations of financial markets and internal shareholders with regard to corporate sustainability performance has been growing constantly and companies with environmental management sound practices are already rewarded by – for instance – lower cost of capital. The rapid growth of ethical investment schemes, indeed, witnesses that financial institutions and other investment funds providers are giving preferences to projects and companies

32 It is conceptual framework of business ethics and organizational management proposed by Edward Erroman. According to it, companies have responsibilities and duties towards a

by Edward Freeman. According to it, companies have responsibilities and duties towards a wider range of subjects including employees, customers, suppliers, financiers, communities, governmental bodies, political groups, trade associations.

³³ Currin Emma, 2011, Businesses Going Green: An Analysis of the Factors that Motivate Firms to Adopt Environmentally Friendly Practices, Coastal Carolina University Press;

that are environmental friendly and consequently, those associated with a badly managed environmental performance might suffer significant financial losses.

Customers and business partners. "Environmental impact" is one of the main item considered by costumers in their purchasing decisions and, hence, being able to show improvements about company's environmental performance is a key aspect to ensure consumers' loyalty and sales. Similarly, for B2B companies³⁴ as well as for multinational companies, pressures might come from trading partners and subcontractors. In fact, in order to enhance the overall environmental performance, suppliers and companies alongside the supply chain mutually force one another to adopt environmental management practices. As we will explain in the next chapter, many multinational companies rely on a structured set of environmental criteria to select their suppliers.

Community, Media and Pressure Groups. Any company carries on its business while sharing the surroundings with the local population which is increasingly demanding for responsible and ethical practices. Besides, public awareness on environmental issues as well as the access on information about companies' performance augment the power of local communities and international NGOs while making corporations more publicly accountable for their actions. Deficits, being they real or assumed, would damage company's image and reputation.

Government. It has played a significant role in putting pressures on companies through environmental legislation, yet mainly in developed countries. Overtime, legislation covering water and air pollution, use of products and processes harmful for the environment has been implemented and has, hence forcing firms' compliance to it. Berry and Rondinelli state that "not comply with governments regulations is no longer an option for corporations that seek

³⁴ Business-to-business or B2B, defines a situation where one business makes a commercial transaction with another.

to be competitive in international markets"³⁵. In addition to environmental rules, governments have progressively applied market instruments to achieve environmental objectives, such as imposition of taxes as well provision of subsidies on environmental friendly products and information about environmental management procedures.

2.7 A drawback: The *Greenwashing* concept

The term of "greenwashing" has been firstly used by the environmentalist Jay Westerveld in a 1986 essay – about the hotel industry's practice of placing placards in each of the room asking clients to reuse the towels for "saving the environment" – but has become popular after Greenpeace campaigns and publications. The NGOs defines the concept as "cynical, superficial public relation marketing aimed at protecting a falsely benign environmental corporate image"³⁶. Similarly, the organization Coporate Watch describes it as the "phenomenon of socially and environmentally disruptive corporations attempting to preserve and expand their markets by posing as friend of the environment"³⁷. In other words, a company is practicing *greenwashing* any time it misleads customers by creating an environmentally friendly perception of a product in order to restore their image and to create benefits. As stated before, one of the advantage companies gain by managing their environmental performance, stems from an enhancement in the brand image of the company itself. For that reason, firms with poor environmental performance engage in positive communication to evoke natural environment roots in products or practices that are actually harmful for consumers and planet by spending more money or time on advertising about being "green", rather than perform "green".

³⁵ Wong, Yin-king, 2000, *Integrating environmental criteria into the supplier selection process*, University of Hong Kong.

³⁶ Definition retrieved from Greenpeace website: http://www.greenpeace.org/

³⁷ Definition retrieved from Corporate Watch website: https://corporatewatch.org/

Integrating environmental-friendly principles into management practices is a real attempt to find market-base solution for the most pressing global challenges or is it good marketing? Although it may result clear that – till reporting environmental performance and disclosing information remains mainly a voluntary action – there will be no absolutely certainty about whether a company really adopts environmental sound practices in its business processes or just changes the name or the logo of products to attracts green consumers and strengthen its brand, Terrachoice consulting agency, lists the 7 sins to identify *greewashing* behaviors.

- Sin of the hidden trade off: labeling a product as environmentally friendly based on a small set of attributes (i.e., made of recycled content) when other attributes not addressed (i.e., energy use of manufacturing, gas emissions, etc.) might make a bigger impact on the eco-friendliness of a product as a whole.
- Sin of no proof: Making an environmental claim without providing easily accessible evidence or information on either the label or supported by third party certification (i.e., a light bulb is publicized as energy efficient with no supporting data).
- Sin of vagueness: Using terms that are too broad, poorly defined to be properly understood or even misunderstood by costumers (i.e., an "allnatural" cleaner may still contain harmful ingredients which are not necessarily eco-friendly).
- Sing of irrelevance: Stating something that is technically true but not a distinguishing factor when looking for eco-friendly products (i.e., advertised as "CFC-Free"—but since Chlorofluorocarbons are banned by law this is unremarkable.)
- Sign of lesser of two evils: Claiming to be greener than other products in its category when the category as a whole may be environmentally unfriendly (i.e., an organic cigarette may be greener, but it is still a cigarette).
- *Sign of fibbing*: the least frequent Sin, consists in making environmental claims that are simply false.

• Sign of worshiping false labels: implies that a product, through images or words, gives the false impression of a having a third party endorsement.

Regardless the drivers that overtime lead companies to include environmental considerations on their corporate agenda, it is fair to assess that the link between Business and Environment is not necessary just a negative one. In fact, environmental performance management acts at the same time as a tool to contain environmental externalities while assuring higher long-term profit for companies that choose to undertake it.

A question arises: what would happen when business is carried on at an international level? In other words, which are the further issues a company faces in managing its cross border environmental performance?

The next chapter will study the multinational companies' role in managing their environmental impact, focusing both on challenges and practical responses proceeding from internationalizing business operations.

3. Environmental Management in Multinational Corporations

At an international level, concerns about environmental protection and sustainability are exacerbated and, in fact, MNCs³⁸ are under the spotlight since the 1992 Rio Conference. Due to the magnitude of their economic impact, the international community recognized the potential important function exerted by MNCs in pursuing the path of sustainable development or at least in managing their environmental performance so as to widespread the creation and adoption of environmental friendly practices and standards. What has been also recognized it is the dual role of multinational companies in both affecting and addressing the global environment issue. On the one hand, they are the major cause of negative externalities as they, "by necessity" engage in a wider range of hazardous and pollution activities difficult to be controlled within an internationally spread management structure. On the other hand, being the most powerful agent in the world, they have the responsibility and the potential capability to positively influence a shift towards a more environmentally sustainable way of doing business. Leading both technological change and consumers' demand and having high financial resources as well as managerial know-how, they might be able to shape current industries with new best practices worldwide, in harmony with the surrounding environment. Moreover, it has to be stressed that MNCs show quite an interest in positively leveraging the global environment issue in that climate change, resource depletion and the other critical environmental concerns may likely have a strong impact on their core businesses slackening their performance. In other words, beyond the ethical call towards sustainable development, MNCs have realized that in order to keep thriving in a more environmentally conscious era, they have to embrace cross border environmental management, namely rethink

-

³⁸ MNCs: acronym that stands for Multi-National Corporations.

goals, strategies and operations through the lens of corporate environmental responsibility.

After having addressed the environment-linked challenges faced by MNCs in their international businesses, the following chapter will focus on the cross border environmental management topic to understand strategies, tools and techniques that are at companies' disposal.

3.1 International Business Challenges

"Internationalization is a mixture of strategic thinking, strategic action, emergent developments, chance and necessity enabling companies to do business in foreign markets" ³⁹.

In other words, internationalization may be thought as a process through which a firm is increasingly committed and involved to serving markets outside of its home country. One of the biggest challenges stems from the planning and the decision making underpinning this process. It assumes strategic and operational issues including the analysis of both internal characteristics of the company – such as business model, type of products or services offered, size and structure – and exogenous considerations about the target market – for example gathering basic data about the political, social and regulatory context as well as the competitive overview – in order to eventually choose the best entry mode⁴⁰ and penetration strategy.

In strategically managing this process, environmental concerns arise and play a particularly critical role in managing the supply chain worldwide and in dealing with the specific country or set of countries regulatory framework a company must confront with.

_

³⁹ Johanson, J., Vahlne, J.E., 1977, *The Internationalization Process of the firm-A model of knowledge development and increasing foreign markets commitments*, Journal of International Business Studies.

⁴⁰ There are two major types of entry modes: equity and non-equity modes. The former includes export and contractual agreements such as licensing, franchising, turnkey projects. The latter includes: joint venture and wholly owned subsidiaries.

3.1.1 Regulatory turbulence and pollution havens

Companies operating in multiple countries face different and often changing environmental legislation and, at the same time, binding regulatory regimes have predominantly remained the realm of national governments as, although international environmental agreements and standards exist, they are compulsory only for those countries that voluntary ratify them.

While environmental regulation can take various forms and cover different topics, its degree of stringency and implementation can be considered a key aspect. On the one hand, certain countries issue stringent regulation reflecting the political and cultural desire to protect the natural environment by clearly guiding and binding corporate behaviors. On the other hand, others countries, usually the developing ones, show very lax environmental laws or do not have the apparatus to implement and enforce them. The lack of implementation is due to several reasons: corruptions, inadequate political and administrative capacity or prioritization of other public policy issues, as well as strategic willingness to attract foreign direct investments. In fact, lax regulatory regimes, though unpredictable and uncertain, are interesting destinations for international business and many MNCs are blame of adopting double environmental standards, low within developing countries and high within the most developed ones, in order to take advantage of less bound environmental rules. At the same time, it is also true that locally complying with different standards and diversifying the environmental performance across countries may not be possible or may result in a costlier strategy. On one hand, as MNCs mostly rely on geographically disaggregated value chain, they must ensure that all the stages abide by similar standards and practices in order to eventually offer reliable products, above all as far as concern standardized products. On the other and, changing processes and procedures does not allow the exploitation of economies of scales.

This dilemma exemplifies a very *Leitmotiv* alongside the overall internationalization process, namely the choice in between a standardization

and a localization strategy, which we will discuss later in the chapter in defining cross border environmental management strategies.

The main risk arising in the context of lax regulatory regimes is that such fewer restrictions offer "pollution havens" for dirty companies.

The pollution haven hypothesis argues that, under free trade, multinational firms will relocate the production of their pollution-intensive goods into developing countries in order to exploit the location advantage of lax regulation and low environment monitoring.

Global environmental concerns in developed countries caused them to enact strict environmental regulation which, in turn, increased short-term production costs at home. On the contrary, in such pollution havens, "dirty companies" are allowed to use outdated production processes or heavy polluting forbidden products enabling them to reduce costs and to enhance productivity.

The hypothesis predicts also that, over time, some countries will specialize in dirty products and export them to other countries that exploit a kind of comparative advantage in pollution but end up with a more damaged environment. Thus developed countries are expected to benefit in terms of environmental quality from trading in such goods, while developing countries will lose.

According to the trade and environment literature, the pollution heaven hypothesis is verified if low environmental standards become a source of comparative advantage and therefore drive shifts in trade pattern. Eventually, such shifts might lead to the so called "Race to the bottom" which describes a progressively government deregulation towards low and lax environmental standards, caused by downward pressures on developing countries willing to attract companies from the most developed ones.

3.1.2 The Global Supply Chain

Generally speaking, with the concept "supply chain" we refer to those procedures, activities and organizations associated with a business process stages that are involved in the planning, manufacturing and delivery of final goods and services. Managing the supply chain is aimed at merging business functions and procedures, spread both across and within companies, into a logically connected business model able to promptly react to market demands through an efficient and effective utilization of resources – including stock, inventory, labor and distribution capacity.

Since the late 1980s, exploitation of international factor cost differences (i.e. lowly priced labor, land, or other resources) and the availability of complementarity capacities have led to advanced geographic specialization, high degree of value chain disaggregation and, hence, to increased market interdependency.

The supply chain of multinational companies is more complex, elaborated and global in scale as it usually involves contractors and subcontractors located worldwide that are linked by information, capital and material flows. In line with the value of the product comes the environmental and social burden incurred during different stages of production. In fact, corporate social and environmental responsibility, although it is a broad issue encompassing the whole company's treatment of human rights and environment, comes to play a critical role when dealing with supply chain, above all when business units and processes are set in developing countries with lax regulatory legislations.

Furthermore, the tendency of outsourcing, the globalization of the economy as well as an increased request of transparency and sustainability, imply multinational companies' operations being under inspection. MNCs, due to their geographically spread structure, are accountable for the processes and operations within the organization and outside of it. They are held responsible not only for aspects such as quality and delivery dates, but also for working conditions and environmental impacts of all the suppliers and business partners – even without exercising ownership – they work with.

In the traditional shareholder view of the company, the latter only has a binding fiduciary duty to put firm's owners needs first, being its sole and primary aim the increase of value and profit for them. Stakeholders theory, on the other hand, states that a company owes a responsibility to a wider group of stakeholders, namely any person or group which can affect and be affected by the actions of a business.

In fact, it has been frequently stressed that, beyond the economic rationale, the willingness to tackle environmental and social issues while doing business has significantly increased in recent years in response to evolving framework conditions – among which government and regulative pressures, changing in consumers purchasing behaviors and financial actors expectations as well as compelling concerns of the civil society. Communities and NGOs worldwide are closely monitoring environmental and social impacts of MNCs business activities and actual or assumed deficits are sanctioned with public criticism and associated loss of reputation. Especially medias, that with the escalation of digital communication technology strongly influence public's perception of organization, exert an important pressure on corporations for which it has become far more complex to hide unethical actions and conducts.

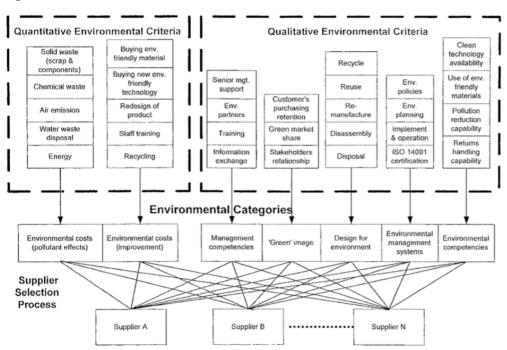
Furthermore, it is also true that shaping the stages of a business process with environmental friendly principles and practices is in the power of those multinational corporations that understood the importance of spreading them to all organizational areas, subsidiaries abroad and foreign partners.

In order to integrate the environmental perspective into the supply chain, MNCs can rely on different channels and mechanisms. On one hand, accurately selecting partners and suppliers by auditing and assessing them on environmental performance metrics and standards, set both at industry and international levels – and eventually reporting strategic data and relevant measures. On the other hand, positively broadcast the environmental responsibility framework through incentives – such as long term contracts – technical support and formal training for key workers to accomplish the

required performance as well as introducing environmental friendly initiatives and integrating environmental principles into corporate code of conducts.

Chapter 4 deals with tools and techniques MNCs can rely on in order to comprehensively manage their environmental performance, in the current section it is interesting to focus on the environmental criteria of the supplier selection process proposed by a scholar of the Hong Kong University and shown in Figure 2.

Figure 2



Source: Wong, Yin-king, 2000, *Integrating environmental criteria into the supplier selection process*, Thesis submitted to University of Hong Kong;

In the environmental framework represented above, seven environmental categories and relative sub-criteria are identified and divided into two main typologies of criteria: "Quantitative Environmental Criteria" and "Qualitative Environmental Criteria".

The former item, gathers quantitative factors that can be expressed in monetary terms, namely two kinds of environmental costs:

- Environmental costs pollutant effect include all those costs due to the treatment and disposal of pollutants: solid, chemical and water waste, air pollutants, and costs of energy consumed to produce a product or a component.
- Environmental Costs improvements refer to those investments carried on by suppliers in order to enhance their environmental performance. The author identifies many categories of possible improvements with related costs: buying environmental friendly material and technology, implementing eco-design, developing an environmental culture through training and awareness programs, integrating recycled materials and recycled related practices.

The latter, named "Qualitative Environmental Criteria" cluster together all the criteria that contribute in shaping the subjective decision-making process of a specific company when evaluates suppliers. In other words, the selection process should be driven by qualitative factors listed and briefly explained below.

- Management competencies. The degree of supplier management effort in dealing with environmental issues is to be considered as a strategic asset and assessed by looking at:
- Senior management support, involvement and amount of investments;
- Extent of environmental long-term partnerships with their major stakeholders;
- Number and extent of training programmes aimed at outlining specific environmental problems, finding solution and listening at employees to achieve environmental sound practices;
- Exchanging information through the working areas as well as with costumers and end-users.
- *Green image.* The growing importance attributed by the market to environmental issues has emphasized the importance of the corporate

- green image perceived by customers and the wider community, hence, suppliers selected as working partners should share the same environmental friendly reputation which depends on:
- The ability to satisfy customers' requirements related to product environmental performance so that it can retain customers' order;
- Extent of "green market" share which indicates that suppliers has put considerable effort in developing environmental friendly principles and business processes;
- Satisfactory relationship with stakeholders with reference to environmental requirements about products and services perceived as risky.
- Design for the environment. Suppliers are evaluated according to their ability of incorporating environmental concerns in the design of products or components. Emphasis is put on considering the complete product life cycle when planning the design according to the criteria of: recyclability, reuse, remanufacturability, disassembly and disposal.
- Environmental management systems. Whether a supplier adopts an EMS, namely a structured environmental policy, planning and implementation procedures, is another key factor to assess suppliers and monitor their improvements. Furthermore, it may result interesting for companies to check whether a suppliers obtained a third party certification such as ISO 140001.
- Environmental competencies. The evaluation of this category stems from the numerical data collected through the previous quantitative criteria and allows to assess all the suppliers' capabilities specifically related to their environmental performance or the efforts of managing their impacts. Those competencies can be described in terms of:
- Kind of clean technologies currently available and ability to adopt new practices and to form partnerships to develop environmental management systems as well;
- The variety of environmental friendly materials used or the ability to redesign the product so that it can be made from such materials;

- The pollution reduction capability alongside the manufacturing as well processing stages. Companies will prefer to collaborate with suppliers able to reduce pollution overtime and to efficiently and effectively modify existing practices;
- Returns handling capability which is related to reverse logistics: shipments of packaging waste, recyclable packages and customers returns in the logistic system.

This framework, although there is no empirical evidence that all criteria are simultaneously used, might be advantageous, not only for selecting suppliers but also to inspire environmental practices within the whole corporations. Furthermore, it well drawn the complexity companies face in addressing environmental concerns alongside a global supply chain.

3.2 Cross border Environmental Management: concepts and strategies

The concept of "cross border environmental management" has been coined around the mid-1990s to capture the international aspect of the environmental management and, hence, it refers to all those MNCs environmental management practices that concern foreign activities, be they of equity or non equity nature.

It has been already discussed that environmental management, as a discipline within the business management, refers to the objectives, standards, procedures and practices that a firm sets up and integrates into the overall corporate strategy to tackle environmental concerns, usually by relying on a Environmental Management System. For a general understanding, its main features are listed below, whereas next sections will focus in depth on EMS rationale:

- Environmental policy statement that reflect company's commitment and boundaries;
- Structured plan to achieve specific environmental targets, goals and standards;
- Allocation of resources and responsibilities within the organization
- Implementation of practices and processes to pursuing goals and standards:
- Enforcement procedures as well use monitoring practices to measure progress and to report data about company's performance;
- Reviewing the systems for continuous improvements;

As firms internationalize, such a "framework should be geared towards managing offshore operations in order to be the bridge between headquarters and foreign affiliates"⁴¹.

In overviewing the environmental management literature, we studied many streams of research that usually categorize companies approach toward environmental performance but none of them focus on cross border aspects. Following the rationale of Bartlett and Goshal's archetypes of MNCs⁴², other scholars proposed a typology of cross border environmental management strategies adopted by corporations based on either local adaptation or global standardization logics. A first cluster is labelled *Decentralized Management* and it is characterized by the absence of cross border environmental policies and procedures. The affiliate autonomously manages its environmental performance, within local boundaries, by establishing internal EMS suitable for the specific context and, hence, able to address local concerns and issues.

_

⁴¹ Hansen W. Michael, *Cross border environmental management in transnational corporations*, 1999, Report available on the United Nation Conference on Trade and Development (UNCTAD) website;

⁴² Bartlet and Ghoshal make a distinction between Multinational, International, Classic Global and Complex Global organizations. The first category depicts a situation where subsidiaries are largely stand alone operations. The second refers to a situation where subsidiaries are thinly integrated. The Classic Global organization refers to a situation where the subsidiaries are totally integrated and subordinated headquarters strategies and in fact become replica of home country operations. The Complex Global category refers to a situation where affiliates are self-standing entities but fully integrated in the overall strategy of the company;

However, seldom such an extreme "stand alone" approach has been undertaken by MNCs which, rather, seek at least to ensure that subsidiaries abide by environmental regulation and standards, namely adopting an *International Compliance Strategy*. According to it, local managers are free to oversee the affiliate's environmental performance by independently setting specific policies and programmes but, at the same time, they must comply with the environmental regulative framework – rules and standards – both at national and international level. In order to guarantee the compliance, procedures for enforcement, monitoring and auditing are homogeneously spread downward from the headquarters to all the subsidiaries. Choosing a local adaptation mindset, as the previous models do, on the one hand allows companies to exploit location specific environmental advantages of host country; but on the other hand, it might arise all those drawbacks that the pollution haven hypothesis, we discussed earlier, predicts.

A third category of corporations opts for a *Centralized Management* by ruling from the headquarters a unique EMS to be replicated abroad. Such a management framework defines all the policies, standards procedures and practices to be hierarchically applied within the whole organization to handle the environmental performance, regardless of local requirements and specificities. By centralizing the environmental management function, instead of creating multiple standards and processes to fit different locations, "risks are minimized, economies-of-scale obtained and costly retrofitting in case of changes in host country legislation are avoided".

Finally, a fourth label, *Globally Integrated Management*, gathers companies that horizontally integrate environmental policies, standards and practices within the corporate network. The EMS adopted is outlined in accordance and with the contribution of any companies' affiliates in order to be at the cutting-edge of global environmental management worldwide. In fact, environmental friendly initiatives and clean technologies can be developed at facilities in any country; as well as individual units are allowed to adapt the EMS to suit with

⁴³ Hansen W. Michael, *Cross border environmental management in transnational corporations*, 1999, Report available on the United Nation Conference on Trade and Development (UNCTAD) website;

local requirements, yet within the boundaries established by the core corporate principles and strategies. Under this approach, thank to stringent internal benchmarking and third party auditing, "goals are set locally but driven globally by the overall philosophy and objectives of the corporation",44.

Table 3 summarizes the main concepts of cross border environmental management typology.

Table 3

	Decentralized environmental management	International compliance	Centralized environmental management	Globally integrated environmental management
Environmental management focus	Local adaptation	Host country legislation	Home country legislation/ company standards	Company standards/ International standards
Typical policy statement	None	"Meet and comply with all standards nationally and internationally."	"Employ the same standards and criteria world-wide."	"Strive to become global environmental leaders"; "Acknowledges responsibilities for the global environment "
Worldwide environmental policies and programmes	None	None	Pollution prevention; Waste minimization; energy conservation; safety zones in LDCs; toxic education programmes	Green R&D Climate change policies; Bio diversity programmes; Dialogue with external stakeholder
Cross border environmental control procedures	None	Procedure to ensure compliance with regulations home and abroad: Pre acquisition assessments; regulatory compliance auditing; monitoring procedures	Procedures to ensure vertical integration: Auditing according to company internal standards; reporting, green accounting; training programmes	Procedures and activities to ensure horizontal integration: Information exchange; life cycle analysis; third party auditing;

Source: Hansen W. Michael, *Cross border environmental management in transnational corporations*, 1999, Report available on the United Nation Conference on Trade and Development (UNCTAD) website.

The environmental implications of international production may extend beyond equity relations. We learnt from the previous sections that MNCs are not only accountable for conducts held by wholly-owned facilities, but also for practices implemented by their business partners and for the entire supply chain – which

_

⁴⁴ Hansen W. Michael, *Cross border environmental management in transnational corporations*, 1999, Report available on the United Nation Conference on Trade and Development (UNCTAD) website;

typically integrates production networks globally spread. As discussed earlier, means available for companies to apply a backward oriented environmental management stem from a stringent and accurate selection process of suppliers and partners.

The following chapter deals with the environmental management tools and techniques through which companies can determine, control and evaluate its performance and that one of it partners and affiliates.

4. Environmental Performance Management Tools and Techniques

Companies have a wide range of possible alternatives to manage their environmental performance and, in general, to handle their impact on the planet.

Certainly, as a first step, they should embed aims and intentions underpinning the company's commitment towards environment in to the overall corporate culture. Whether as an independent statement encompassed in the codes of conduct, or as an integral part of the EMS, the environmental policy should guide the whole corporation by preparing the field for further environmental management activities.

In order to better understand the analysis concerning the main tools and techniques to manage their environmental performance it is important to preliminary remark that:

A) Each of the tool we will discuss in the current section can be intended both as an independent technique of environmental performance management and as an element of the EMS (which in turns is considered a type of environmental management technique).

In other words, there are companies that choose to coordinate many tools in a unique and structured framework enabling them to manage their environmental affairs in a planned and systematic way; others that prefer to rely on some techniques separately – such as by embedding a policy statement into the corporate code of conduct, or setting up an auditing scheme to check whether a business unit complies with environmental standards.

B) As we have briefly explained in chapter 1, the ISO is an independent, non-governmental organization that has issued more than 20,000 internationally recognized standards, among which the ISO 14000 series (about the environmental management) are the most used.

The ISO 14001 sets out a blueprint for the development of Environmental Management Systems and it is the only ISO 14000 standard against which a company can be certified by a third party.

The other standards cover a wider range of environmental issues, and basically represent an umbrella of guidelines, many to help companies achieving the ISO 14001 certification, but also implemented as stand alone tools to manage the environmental performance.

C) Hence, either a company decide to build up an EMS or to simply adopt a set of tools to manage its environmental performance, it can follow standards and guidelines formally established by international agencies and organizations, including ISO, OECD and EMAS.

It is finally important to stress that the commitment to comply with such standards, though necessary to compete on the market, is on a voluntary basis; it is also voluntary the certification a company might request to independent agencies for having pursued prearranged environmental performance objectives.

4.1 Environmental Management System

Although many methods and techniques have been developed to manage corporate environmental performance – and we will go through them alongside the section – overtime companies have realized that developing their own environmental management system (EMS), would result in greater benefits. Schimdheiny and Denton suggest that, whether in the short-term it might be

costly to invest in an effective operational strategy – as the EMS is – it might "potentially avoid future environmental spill, crises and liabilities".

An EMS can be defined as a structured framework for managing organizations' significant environmental aspects by providing a set of practices and processes through which it can engage with employees, customers, subcontractors and other stakeholders to identify environmental goals and try to achieve them.

In other words, by coordinating organizational structure, defining responsibilities and resources and consistently controlling processes a company outlines key aspects of its environmental impact and set up a plan to handle them.

Although it adds operational costs, an environmental management system can also benefit a company in a number of ways:

- Facilitating greater awareness of legislative requirements and thereby developing plans for compliance with environmental law;
- Identifying the potential for cost savings through well-managed use of resources and efficiency improvements;
- Providing a better understanding and a greater control of processes thereby reducing emissions and the risk of pollution incidents;
- Improving company's image and reputation among staff, clients companies, supplier and the community by enabling more detailed reporting about its environmental performance.

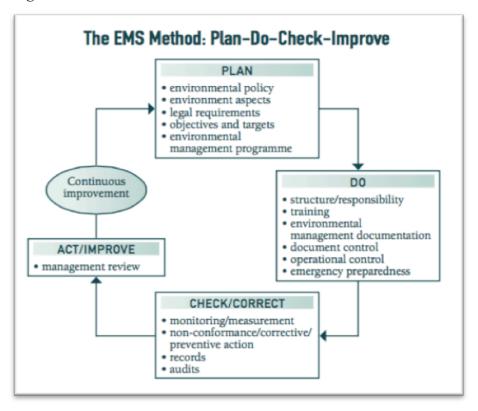
Although the EMS does not dictate a level of environmental performance and it is tailored to the company's business and goals, each EMS is built as a continuous improvement process, with a basic set of elements, following the Deming cycle⁴⁶, represented below in Figure 3.

-

⁴⁵ Wong, Yin-king, *Integrating environmental criteria into the supplier selection process*, 2000, University of Hong Kong;

⁴⁶ Deming Cycle is an iterative four-step management method used in business for the control and continual improvement of processes and products;

Figure 3



Source: Commission for Environmental Cooperation Website.

Generally speaking, a company is free to design and develop its own "in-house" system to meet its particular needs and objectives, but adopting such an on-going scheme would find an international and official mandate. In fact, the ISO formulated a common model for EMS – ISO 14001 – which standardizes a set of elements that an EMS should contain by following a phased incremental approach. Hence, either to achieve a third party certification (ISO, EMAS or a national one) or to simply rely on well-established guidelines, it may be helpful for a company to build its EMS according to the scheme we will explain in the next section.

4.2 ISO series and EMAS

National and international EMS certification schemes and environmental management guidelines emerged in the early 1990 and have been since then standardized and structured to help companies undertake environmentally responsible conducts while doing business. In the current section, we focus on the most known and adopted frameworks worldwide: ISO 14000 standards series and the Ecomanagement and Audit Scheme (EMAS) issued within the European Union.

As it should be clear from previous explanations, the ISO 14001 standard is the corner stone standard of the series. It specifies a framework of control for an EMS against which companies can be voluntary certified by a third party body (ISO does not audit or certify the system itself). The other standards in the ISO 14000 family contain environmental management concepts and practices to guide companies on developing other approaches, such as audits, labelling and life cycle analysis to face global environmental challenges. These include, for instance, the following:

- o ISO 14010 lists general principles about environmental audit;
- ISO 14013/5 provides audit program review and assessment materials:
- o ISO 14020+ outlines labelling issues;
- o ISO 14040+ covers life cycle issues;
- o ISO14063 defines tools for the environmental communication;
- o ISO 14064, 14065 and 14067 describes greenhouse gas emissions measurements, monitoring, reporting.

Regardless of the size or the industry of the organization, to meet ISO standard 14001 requirements and be potentially certified, a company must show the commitment to continuous improvement as well as the

compliance with applicable legislation and regulation. In order to do so, ISO established internationally accepted criteria gathered in five major areas we briefly describe; those areas are strictly interconnected being also the stages for developing a continuously improving system.

1. Environmental policy statement

As first step, a company must state the environmental policy, which is the overall framework which provides a sense of direction for a company by outlining its aims and intentions with respect to the environment. It must clearly communicate the general commitment to managing environmental impacts while doing business and, hence, it should be endorsed by all the company 's layers as well as It should be made publicly available.

In other words, the EMS should be based upon a documented and well communicated policy including:

- Provision for compliance with environmental regulation;
- Commitment to continuous improvements in environmental performance, including in areas not subject to regulation;
- Commitment to pollution prevention and reduction of environmental risks;
- Commitment to sharing information with internal and external stakeholders on environmental performance against all EMS objectives and targets.

2. Planning

Starting from the environmental policy and being consistent with legal requirements, a company must outline specific targets and objectives with respect to the most significant environmental aspects it wants to manage.

The standard defines "significant environmental aspects" those elements of an organization's activities, products or services which can significantly interact

with the environment. Then, consequently, a strategic and actionable program to achieve them must be devised.

Therefore, a firm must undertake the following steps:

- Carrying on an environmental review, namely a deep analysis in order to point out the areas where it has the strongest impact (for instance by undertaking a Product Life Cycle Assessment);
- Setting out the legal and other requirements it must accomplish, namely all the local and international regulations and self-imposed requirements consist with the policy statement;
- Setting out measurable objectives and targets it seeks to achieve through the implementation of the EMS. They will drive the overall plan by helping company to properly allocate resources while managing the environmental performance,
- Devising a road map to be followed in order to achieve objectives and targets. It describes how the company will translate goals and policy commitments into concrete actions by defining responsibilities, processes and time-frame for pursuing them.

3. Implementation and Operation

Having designed a plan, the company must put in place a set of elements enabling its successful implementation and operation.

- Role, responsibility and authority of all members involved with the EMS must be clarified;
- Competence, training and awareness about the implementation of the EMS must be transmitted to all members;
- Effective and suitable procedures for communication must be established in order to motivate the staff, exchange information with external parties and continuously monitor the environmental performance;

- A documentation structured must devised in order to collect any relevant findings, results and facts occurring during the EMS implementation;
- Procedures and activities to support the system in achieving targets and objectives must be design, as well as a framework of operational control must be implemented;
- Other procedures to identify and respond to potential accident and emergency situation must be defined.

4. Checking and Corrective Action

Once the plan has been implemented a company must continuously check whether procedures and processes meet prearranged objectives and targets. In other words, the plan consistency and effectiveness with initial goals and requirements must be periodically measured to understand if corrective actions or changings are needed.

To put in force that step, the following tools must be designed within the EMS:

- Procedures for monitoring and measure the environmental performance of significant areas as well as for evaluating the regulative compliance;
- On the basis of the abovementioned results, nonconformity, preventive and corrective actions are implemented to fix or avoid problems for the future;
- Internal auditing system to periodically determine the company's compliance with ISO 14001;
- Results and audit findings must be reported in a structured easy-to-becontrolled file of records.

5. Management Review

The initial commitment to continual improvements in the company's environmental performance as well as changings in circumstances and targets requires that a company reviews the overall system on a regular basis. The re-

examination of all the elements previously implemented might lead to the introduction of new processes, procedures and to the design of new objectives and roles.

The other relevant framework a company can voluntary follow is the Eco-Management and Audit Scheme. EMAS was developed in 1993 by the European Commission and, according to its website, it is defined as "a premium management instrument for companies and other organizations to evaluate, report and improve their environmental performance"⁴⁷.

All organizations willing to adopt EMAS must run an EMS according to the ISO 14001 requirements and, hence, building a structured framework with the same elements already discussed above. Unlike ISO 14001, EMAS additionally requires that, after having developed a functioning environmental management system, a company publishes a report detailing measures and improvements carried on, to be eventually verified by a competent third party body of a specific EU country. Verification, validation and registration are the last steps to officially become EMAS certified. The picture below shows the overall process.

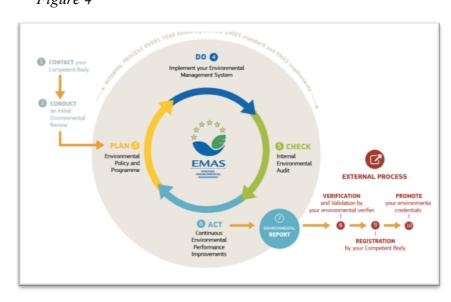


Figure 4

Source: European Commission Website.

⁴⁷ EMAS web site: http://ec.europa.eu/environment/index_en.htm

-

4.3 Environmental Audit

Generally speaking, the term "audit" has its origins in the financial sector and is defined as a methodical examination – involving analysis, tests and confirmations – of procedures and practices whose goal is to verify whether they comply with legal requirements, internal policies and accepted practices. Similarly, when applied to environmental issues, auditing procedures are aimed at evaluating that a company complies with regulations, requirements of some certification and standards (as it occurs for ISO and EMAS) or that it is in line with the environmental policy statement initially adopted; besides it can be carried on to evaluate a specific area or business unit whereby significant environmental impacts are recognized.

Therefore, the environmental audit, either as a basic element of the EMS or as a stand alone tool, is a key mean for a company to understand how it can sustain or improve its environmental performance by providing the following benefits:

- Reduction in operational inefficiencies by highlighting areas where costs can be lowered or performance improved;
- Mitigation and management of legal and reputational risks arising from breach in regulation;
- Attracting capital by providing qualified data about company's commitment to environmental sound practices;
- Gaining certification requirements at national and international level

Furthermore, as mentioned before in dealing with the topic of global supply chain, consistency of procedures and legal compliance can be controlled, assessed and enhanced also with respect to suppliers and business partners, whose alignment with company standards and policies is extremely important.

Regardless of whether an environmental audit is set up to evaluate the headquarters performance or those of others affiliates and business partners, it is possible to identify a mainstream process which is summarize in Table 4.

Table 4

1.Goal and	2.Inventory	3.Impact	4.Improvement
scope definition	Analysis	Assessment	Assessment
Set limits, depth and audience of the study; Decide the functional unit and approach needed for it; Describe the product or service to be assessed and its functional systems.	 For each of the life-cycle stage quantify: emissions, energy requirements and material used; Combine and relate inventory data and calculations to the functional unit; 	Gather the potential effects of previously identified inputs and releases into relevant environmental impact category; Evaluate and weight them according their importance;	Interpret results and findings according to the goal and scope; Exemplify needs and opportunities to reduce the environmental impact of the product or service; Provide recommendations to improve the overall

The above mentioned process can be implemented internally, by competent highly trained staff, or externally by outsourcing it. Usually, many companies decide to employ consulting firms or organizations not only due to a lack of suitably qualified in-house auditors but also, and especially, as a matter of credibility. In fact, on the one hand, auditing-specialized companies provide valuable support and technical assistance ensuring better and faster results, though more expensive; on the other hand, relying on a third party that holistically verify the entire process will increase the company's trustworthiness while avoiding internal conflicts of interests.

4.5 Life cycle Assessment (LCA)

Traditionally the Life Cycle Assessment is the most extensive method for systematically studying and examining the total environmental impact of a product through every step of its life – from the raw material extraction to the ultimate disposal. This long-term thinking can be addressed also to materials and services by applying a quantitative evaluation of the environmentally relevant aspects and potential impacts associated with every stage of their life cycle in order to eventually implement substantial improvements.

For a typical product, the LCA tool takes into account the procurement of raw materials, manufacturing processes, selling and transportation procedures, up to the product attributes – such as packaging and design – as well as the consumption and disposal habits.

The figure below summarizes the Life-Cycle thinking which is also called Cradle to Grave Assessment.

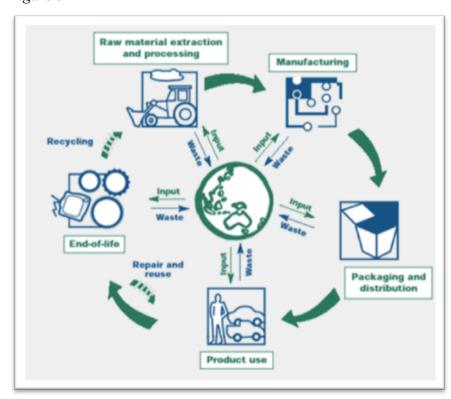


Figure 5

Source: Global Impact Investment Rating System (GIIRS).

This technique, either implemented by external experts or by the company itself through an industry-specific software, is based upon an objective process that calculate environmental burdens of all stages in order to identify alternatives to improve the environmental performance. The ISO provides guidance and standards to undertake a LCA (ISO 14040 +) and recognizes four basic phases:

Table 5

<u></u>			
1.Goal and scope definition	2.Inventory Analysis	3.Impact Assessment	4.Improvement Assessment
•Set limits, depth and audience of the study;		 Gather the potential effects of previously identified inputs and releases into relevant environmental impact 	• Interpret results and findings according to the goal and scope;
•Decide the functional unit and approach needed for it;	Combine and relate inventory data and calculations to the functional unit;	 Evaluate and weight them according their importance; 	•Exemplify needs and opportunities to reduce the environmental impact of the product or service;
product or service to be assessed and its functional systems.			•Provide recommendations to improve the overall Life Cycle;

The main purpose of the Improvement Assessment and of the LC-thinking in general, is to propose significant alternatives to damaging activities and to develop environmental friendly practices and procedures in existing factory processes.

For instance, one of the most known alternative is represented by the Design for Environment (DfE) approach⁴⁸. DfE is an umbrella term for a variety of engineering, manufacturing and packaging techniques that allows a systematic integration of environmental concerns into product and service design and, indeed, it is based upon LCA information. In fact, DfE strategies are aimed at reducing waste and environmental impacts alongside each step needed for producing a good or delivering a service by:

- Minimizing waste, dangerous by-products and raw materials, air pollution, energy expenditures;
- Using environmental friendly packaging, eliminating unnecessary paper and efficiently use (or reuse) space and materials;
- Planning end-of-life strategies for product disposal, disablement, refurbishing and recycle;

The LCA is currently used by companies – within several industries – as an inhouse tool to provide them with information, data and metrics enabling them to respond to markets demand and legislative pressures as well as to explore improved product development and design. Such information and measures involve not only internal factory procedures and production processes, but also the environmental impact of all product ramifications along side the supply chain. In fact, assuming that one or more stages are exerted outside the company, it results clear that LCA represents a chance to understand the various environmental benefits and liabilities of company's suppliers and distributors in order to avoid legal and reputational risks and, hence, manage the overall chain responsibly.

Understanding the overall environmental impact of what a company produces or provides positively enhances its credibility by allowing a transparent communication with stakeholders (i.e. environmental NGOs, local communities, investors and government authorities). Especially from

_

⁴⁸ DfE has been previously mentioned as one of the criteria to properly select those suppliers that consider the entire life-cycle framework when designing and planning products or service.

consumers stand point, LCA information and findings should help to inform them on the purchasing options while avoiding *greenwashing* companies. In other words, being aware about the actual impacts of a product and, meanwhile, acknowledge a company's effort to successfully manage them, might influence consumers buying patterns.

4.6 Ecolabelling

Another product-oriented tool which takes into account life cycle considerations while increasing consumers' awareness are the Eco-labels. Ecolabelling is a voluntary method of environmental performance certification proving that a particular company's product or service has met certain predefined criteria in minimizing its impacts on the planet.

As businesses have started to recognized that environmental concerns may be translated into market advantage, various environmental declarations, claims and labels have emerged. However, not all environmental claims or symbols accurately reflect genuine improved environmental performance but are just repackaging of existing products or *greenwashing* practices to increase sales by exploiting consumers' willingness to reduce environmental impacts.

In order to avoid ambiguity and confusion while protecting both consumers and producers, the International Standard Organization has identified in the ISO 14020 series three broad types of voluntary labels designation briefly described below.

Type I Environmental Labelling

The standard establishes principles and procedures for an effective ecolabelling scheme whereby a third party (the ecolabelling body) assesses company's products or services and eventually awards a mark or logo based on regulation compliance and the fulfilment of a set of environmental criteria. In other words, by applying to a multiple-criteria certification process a company might

gain a licence to use environmental label "indicating the overall environmental *preferability* of a product within a particular product category based on life cycle considerations"⁴⁹.

Therefore, the process requires that the entire product life cycle must be taken into account in order to identify for each stage those environmental criteria that a product successfully met and for which it will be certified. For a sake of transparency and credibility, information about the ecolabelling programmes implementation must be available at any time to interested parties and the verification process must be carried on by an independent agency.

At a global level, the majority of companies in well over 50 countries relies on the Global Ecolabelling Network. Established in 1994, the GEN is a non-profit association working to improve, promote and develop ecolabelling of products and services through the harmonization of Type I ecolabelling programmes around the world.

Type II Self-declared Environmental Claims

Environmental claims voluntary made or advertised for any kind of products and services are regulated by basic requirements in order to prevent misleading communication and harmonize the use of them. First, it is said that all claims made through text, logo or image and used to convey an environmental message shall be: accurate and not misleading; verified and substantiated; unlikely to result in misinterpretation. Secondly, the standard makes it clear that the primary responsibility is held by the person making the claim who must carefully evaluate the content and disclose it to any one interested. Finally, guidance on 15 commonly used claims is given – for instance "degradable", "recycled", "renewable materials", "sustainable".

Type III Environmental Declarations

This type of designation refers to labels providing quantified environmental data of a product according to pre-set categories of parameters established to

⁴⁹ Global Ecolabelling Network website: https://www.globalecolabelling.net/

be used in the business-to-business communication. It described particular aspects of a product environmental performance to enable objective comparison between products within the same industry and, hence, is based on criteria pre-established by industry and trade associations.

The content of a company's declaration is required to be assessed through a third party verification which can potentially ends up with a registered document (EPD trademark) communicating transparent and comparable information about life-cycle environmental impact of products.

Although differing in strength and authority, the labels types discussed above have been identified by the ISO as sharing a common goal, which is:

"...through communication of verifiable and accurate information that is not misleading on environmental aspects of products and services, to encourage the demand for and supply of those products and services that cause less stress on the environment, thereby stimulating the potential for market-driven continuous environmental improvement." ⁵⁰

In other words, the regulation of environmental labels, claims and declarations will create a level playing field whereby: producers and sellers have an incentive to improve their product and processes; environmental friendly companies are publicly awarded with labels differentiating their products within the markets; consumers have access to accurate and globally-recognized information upon which are free to shape their purchasing choices.

4.6 Environmental Performance Evaluation and Reporting

Traditionally, for a company to have a general overview about its environmental performance as a basis for further managing significant environmental aspects, the measurement of those aspects against certain

_

⁵⁰ Iso website: http://www.iso.org/iso/home.html

criteria should taken place. Then, findings and relative objectives for advancement should be clearly reported in a publicly available document for sharing with stakeholders the actual performance and the potential achievable one.

In other words, by means of Performance Indicators an organization should assess its environmental impacts related to input (such as water and energy) and output (such as emissions, waste and effluents) and, afterward, information as well as strategies for improvement should be disclosed and communicated. Either to make a general assessment of a business unit or to evaluate specific product aspects with relevant environmental impacts, a company can rely on different indicators providing quantitative information useful to assure compliance with initial target and objectives as well as legislation. Furthermore, findings and results will be valuable feedbacks for management, employees and stakeholders to track both company's environmental performance strengths and weaknesses.

Each company should select the most appropriate set of indicators according to which operational areas mostly affecting the environment it intends to assess and improve. ISO 14031 gives guidance on the selection and design of suitable indicators and even though it does not establish specific performance levels, it identifies the following macro areas:

- Emissions to Air (Greenhouse Gas, Acid Rain, Ozone substances) per unit production;
- Emissions to water (Pollutants and Metal emissions) per unit production;
- Emissions to land (Acids, Pollutants and Radioactive waste) per unit production;
- Resource Use (Water, Energy, Oil, Natural Gas) per year;
- Hazardous and Non-Hazardous Waste;

As for the other environmental management tools, a company may rely upon those parameters to evaluate and monitor both the headquarters performance and the suppliers' practices along side the overall supply chain. Once the relevant aspects have been assessed, data and information should be reported on a regular basis to communicate performance data and improvements.

4.7 Other Tools

Best practices at work place

A key aspect to successfully integrate environmental concerns into the overall company's performance is to build a strong corporate culture keen in minimizing impacts on the planet. In order to raise both top managers and employees' awareness about the relevance of adopting environmental procedures and practices at business place, environmental friendly initiatives such as company-wide programmes of waste management should be implemented. Those programmes consist of different strategies put in place a daily basis (both in factory an in office) and can be grouped as Reducing, Reusing and Recycling.

The table summarizes some best practices for each of the strategy which are aimed at positively shaping company's staff conducts.

Table 6

	Reduce	Reuse	Recycle
In Factory	 Unplug machines and electronic; Buy essential products in bulk and eliminate unnecessary layers of packaging; Rent equipment that are only used occasionally; 	Purchase used/refurbished equipment Maintain and fix machinery regularly to prolong their lifespan	 Coal ash, slag and spent foundry sand can be recycled in concrete, road embankments, tiles or as structural fill; Covert parts of used equipment to manufacture other products;
In Office	 Use a computerized filing system; Use 100% recycled paper; Encourage workers to consider their consumption of office supply; Share hard copies of documents; 		• Identify local recycling companies and arrange a periodic pick-up of paper, glass, aluminium and plastics; •Educate employees about recycling programmes;

Green Building Practices

Environmental friendly practices encompass a broad range of actions and can be implemented at any company's layers. As much as the green program described above or the DfE approach has positive business and environmental impacts likewise, responsible and resource-efficient practices can be incorporated in managing the building's life cycle with profitable outputs. In fact, there are both environmental and economic benefits for adopting

sustainable methods at any stage of building, from siting and design, to renovate and deconstruction. For instance, by enabling an efficient use of water and energy or by reducing waste and pollution, it reduces operating costs, potentially increases the productivity while protecting people health.

The International Code Council has been promoting the incorporation of green building standards within corporate strategy to increase companies' commitment in reducing the overall impact of their headquarters, affiliates and operating sites. Similarly, the World Green Building Council supports companies with tools and strategies to measure the building environmental performance with the purpose of achieving for sustainable levels of construction, maintenance and demolition.

5. Unilever: a longstanding commitment to sustainability

As case study, we chose a multinational company which embraced a sustainability strategy from the very beginning up to create a broad and bold plan to drive its growth alongside a sustainable path: Unilever. The focus on an international giant of consumers' products with a sustainable DNA allows us to show that social and environmental responsible business is ambitious but possible and profitable. In fact, by looking at the corporate model, choices and behaviors of a group which products are used by 2 billion consumers worldwide in their everyday life – as they cover a wide spectrum of good categories from the personal and house care to the food and beverage – we can acknowledge the extremely important role that multinational companies might exert in positively impact the planet and the people living on it while still thrive economically. In a world where climate change, resources shortages and the gap between poor and rich require a shift towards a sustainable and equitable economic order, business must be part of the solution. Therefore, firms must consider sustainability as a strategic concern by changing their culture, operations and organizational processes in fundamental ways.

From this perspective, Unilever experience can boost the move from an era of exploitation to one where companies compete to explore and embrace new techniques to manage their social and environmental externalities. In other words, it represents a breaking ground example that business growth can be pursued in harmony with eco-system conservation as well human being preservation because "We cannot choose between growth and sustainability. We have to do both."⁵¹.

⁵¹ Dave Lewis, President of Unilever Americas; Unilever Website.

5.1 Company overview

5.1.1 History

The company was founded in 1929 when two major companies, Margarie Unie and Lever Brothers, merged after having dominated the margarine and soap markets respectively for over 50 years.

The soap origins date back to the 1880s when William Lever, then a salesman for his father's wholesale grocery business, recognized the advantages of not only selling, but also manufacturing soap. A new kind of household soap containing palm oil rather than animal fats – which helps it foam more easily – started to be produced in 1885 at Warrington factory and, unusually for that time, branded as Sunlight Soap and sold in a distinctive packaging.

The revolutionary product, that helped popularize the cleanliness and hygiene in the Victorian England, was the first step of a successful path that crossed national boarders. In fact, within a short time period Lever Brothers, recently become a public company, integrated milling operations as well as packaging and transportation businesses of all it products and it was selling them throughout the United Kingdom, in continental Europe, North America, Australia, and South Africa.

The 1870s new product, margarine, is the other "root" of Unilever.

The two Dutch family businesses of butter merchants, Van den Bergh and Jurgens, started competing in the production of what would become an affordable substitute of butter: margarine. They early realized that this good, made from beef fat and milk, could be mass-produced and exported towards other European countries. In fact, in few years the margarine market outstandingly grew and both companies increased their international trades for the remainder of the century.

Nevertheless, in the beginning of the 20th Century soap and margarine producing businesses, both requiring fats and oils as raw materials, started to move into each other's markets sharpen the already intense competition. At the same time, the sudden rise in the cost of raw materials lead many companies within the industries to set up associations to promote their interests, secure

stable sources for their production and face the continuously growing demand for both goods. Around the 1908, Lever Brothers came to an agreement with other manufacturers to restrain competition as well as Van den Bergh and Jurgens stroke a deal to share profits in such a tough market.

What occurred between 1909 and 1920 led the three companies to focus on expanding their businesses through acquisitions in their home countries and worldwide.

On one hand the First World War led soap and margarine markets – vital supplies- to a saturation point. On the other hand, British and German governments placed the fats and oils industry under state regulation. By the middle of the 1920s Lever Brothers controlled 60% of the UK output of soap manufacturing and strengthened its position in North America and Africa; similarly, Jurgens and Van Den Bergh penetrated factories in Scotland, Ireland, England and Germany whereby they opened new margarine factories.

After having both competed and cooperated, Jurgens and Van Den Bergh – who have already teamed up with two European businesses, Centra and Schicht – joined forces to create Margarine Unie. It gathered a large group of European business involved in the production of goods created from oils and fats. The Union forerun the agreement signed in 1929 between Margarine Unie and Lever Brothers which ended the decade with one of the largest merger of its time: Unilever.

As it does today, the newly formed Unilever consisted of two holding companies: Unilever PLC (with headquarters in London) and Unilever N.V. (with headquarters in Rotterdam).

The new organization included an equalization agreement to assure equal profits for shareholders of both companies, as well as identically structured boards. Unilever's parent companies were actually holding companies supervising the operations of hundreds of manufacturing and trading firms worldwide. The end result of the merger was a company that bought and processed more than a third of the world's commercial oils

and fats and traded more products in more places than any other company in the world.

However, it takes time and efforts to build the food and consumers products giant which history covers almost two centuries.

The Great Depression, which struck not long after the new company was formed, affected Unilever operation as well as it did the Second World War at end of the 1930s.

As prices and profits threatened to collapse and many territories were occupied by Nazi troops, Unilever had to rationalize its business by concentrating on fewer brands and focusing on local needs satisfaction. The end result is that Unilever's margarine and edible fat plants are diminished and corporate structure were shaped as to make local Unilever businesses act with a high level of independence and focus on the needs of local markets.

Despite the recession and the wartime, Unilever managed to successfully figure it out: partly thank to companies' acquisition in emerging and wide range product categories like frozen and convenience foods; partly by investing funds in research and development of new materials and production techniques. Remarkably it expanded the U.S. operations through two important acquisitions: Thomas J. Lipton Company, manufacturer of tea (1937), and the Pepsodent brand of toothpaste (1944). Furthermore, the discovery of the hydrogenation process, which enabled manufacturers to turn oils into hard fats, and the possibility of adding vitamins to margarine, which created an opportunity for new health-related product claims.

At the end of the war, although Eastern Europe and China factories remained shut, it was able to regain control of its international network, as well as strengthen the national position being the majority shareholder in Frosted Foods which owned the UK rights to deep-freezing, an innovative method of food preservation. The freezing technique, in fact, was deemed

to be one of the best ways of naturally preserving the goodness of fresh food.

Although Unilever was able to exploit industry and technological breakthroughs, the primary mean of growth resulted to be the expansion of product lines and plant capacities, particularly of meat, fish, ice cream and canned goods. It was not until the 1950, that companies, including Unilever, began to recognize the strategic relationship between marketing, research and development. In fact, along with its acquisition strategy, Unilever started to focus on chemical technologies also by investing in research facilities. In fact, to thrive in the synthetic detergent market, especially in the United States, Unilever was spurred to value research as highly as marketing and sales, making Port Sunlight Research its Research Division with responsibility for both UK and Dutch laboratories.

On one hand, each geographic area required a different kind of product depending on the way consumers washed their clothes and the type of water available to them. On the other hand, new detergents gave rise to new problems concerning the foam disposal in sewage systems and rivers which had become a major issue by the late 1950s. Likewise, research efforts were displayed in food preservation, animal nutrition, and health problems - associated with other personal products such as toothpaste and shampoo – establishing a nutrition research group in the Netherlands which later becomes the Unilever Food and Health Research Institute.

By 1965 the company had 11 major research establishments throughout the world, including laboratories in Continental Europe, the United Kingdom, the United States, and India.

Unilever's ability to effectively answer market demands it's represented by its steady was research in margarine. When first developed, margarine was simply a substitute for the butter that was in short supply during wartime. Once butter offer was plentifully restored, the product needed to offer other advantages to appeal consumers. In order to tackle this issue, Unilever research focused on methods to improve the quality of margarine itself-such as making it easier to spread, more flavorful, and more nutritious. This was the primary attempts of Unilever's laboratory to enhance the raw materials available for margarine production. Eventually, it succeeded in developing new techniques to refine soybean oil, which resulted in higher product standards while at the same time achieving vast savings.

During the 1970s hard economic conditions, Unilever continued to diversify in consumers' goods areas and sectors including plastics, packaging, tropical plantations and a shipping line, as well as a wide range of foods, home and personal care products.

Meanwhile the advent of the European Economic Community, progressively eliminating tariff restrictions, opened to new opportunities, likewise the expansion of the Unilever's subsidiary, the United Africa Company which become UAC International – having expanded since its inception in the 1920s to trade in 43 countries.

The milestone acquisition of National Starch in 1978, a leading producer of adhesives, starch and specialty organic chemicals, started a new strategy with two main purposes: expanding worldwide in the selected coreproduct activities (putting aside the other ones) and increasing growth in North America and major developing countries (as to diminish the high dependency on Europe).

In other words, over the 1980s and 1990s Unilever undertook a period of massive restructuring. It was designed to concentrate the company in "those businesses that we properly understand, in which we have critical mass, and where we believe we have a strong, competitive future", Unilever PLC Chairman M.R. Angus told *Management Today* in 1988.

Concentration on core product areas led to large acquisitions and launching of successful brands worldwide year after year. Among others, worthy to be mentioned are the acquisitions of Brooke Bond in Great Britain and Chesebrough-Pond's in the USA.

The former takeover in 1984, although a hostile one, enabled Unilever to complement the American Lipton brand with the European company, leading the tea industry. The latter, a company with sales of nearly \$3 billion, owned such brands as Vaseline Intensive Care, Pond's Cold Cream, and Ragú spaghetti sauce which allowed Unilever to fill out its international personal products business. Similarly, it became a major player in the perfume and cosmetic industry through three more acquisitions: Shering-Plough's perfume business in Europe; the Calvin Klein business from Minnetonka, Inc.; and, Fabergé Inc., the American producer of Chloe, Lagerfeld, and Fendi perfumes.

All over the decade Unilever launched many product brands but within a narrow range of categories. It was especially successful in Western European countries with the launch of Magnum and Viennetta ice cream; Axe, Breeze and Dove for the personal care sector.

The other side of such rationalization strategy meant for Unilever equally large divestments in ancillary businesses. For instance, in transport, packaging, advertising, and other services that were readily available on the market, where third party suppliers become larger and better equipped to take over non-core tasks. Likewise, it drove the company to sell or withdraw many brands to concentrate on those with the biggest potential.

Between 1984 and 1989 Unilever sold about 70 companies in sectors including the sale of animal feeds, packaging, transport and fish farming businesses.

In a short time period, Unilever penetrated several emerging markets such China, Indonesia, India and Latin America. There it has been struggling against its traditional competitor Procter and Gamble to reach a leadership status in the home and personal care industries. Meanwhile, ice cream and culinary-products markets were conquered through the acquisition of important local companies.

The massive overhaul which meant a progressive cut of business categories from over 50 to just 13, was led by a special committee (the

ExCo) of different business groups, each responsible for a mix of geographical and products areas.

The reorganization ended up with the creation of four main core business areas – Home Care, Personal Care, Foods and Speciality Chemicals – under which many product brands were developed, produced and sold according to local needs and preferences.

Chairman and CEO Floris A. Maljers well explained Unilever's management structure in a 1992 article of the Harvard Business Review:

"The very nature of our products required proximity to local markets; economies of scale in certain functions justify a number of head-office departments; and the need to benefit from everybody's creativity and experience makes a sophisticated means of transferring information across our organization highly desirable. All of these factors led to our present structure: a matrix of individual managers around the world who nonetheless share a common vision and understanding of corporate strategy." 52

Following the rationale of focusing on top brands within core industries, divestments and disposals went by simultaneously with strategic acquisitions in North America, emerging markets and former Soviet Union countries (it entered the Czech Republic and Hungary, and establishes UniRus in Russia).

Besides consolidating its leadership status worldwide, Unilever strengthened its commitment to social and environmental issues.

The pioneering corporate strategy, able to adapt to markets changes while exploiting new opportunities, has always characterized the company together with its "sustainability" bias.

Since from the 1950s Unilever was continuously keen in improving products raw materials, by looking at the externalities on animals, planet

_

⁵² Unilever website, Section Our History: https://www.unilever.com/about/who-we-are/our-history/

and human beings. Also during this decade, in light of growing environmental pressures and consumer concerns about the food chain, the company started initiatives and programs that eventually led to embrace an overarching concept of sustainability in the overall corporate strategy named the Compass. We will focus in depth on it in the next paragraph of the chapter.

The 21th century opened with the launch of Path to Grow which was followed by One Unilever Programme, two turning point strategies that changed Unilever structure and culture by forging paths for a more profitable, sustainable and responsible growth. A common read thread engaged the whole company (and it still does today): to achieve significant growth while minimizing the impact on the environment as well as taking care of people healthy, nutrition and hygiene worldwide. Such an ambitious mission required Unilever not few efforts.

Firstly, it had to further rationalize manufacturing and production sites by leveraging more effectively on economies of scale and through factories disposal and brands withdrawal (by 2001Unilever has cut its brands from 1600 to 900). Nevertheless, reshaping the company portfolio also meant new acquisitions, especially in the food industry. After Ben & Jerry and Slim Fast, in 2000 with the second-largest acquisition in history, Unilever purchased Bestfoods which added important brands such as Knorr and Hellmann's to the pool.

Then, in order to concretely pursue the announced commitment, the company moved ahead in the path towards sustainability in numbers of ways. On one hand, to study and face important challenges associated to nutrition and health, centres of excellence and programmes in partnership with international organizations were launched. By 2005 Unilever founded a Health Institute and completed the Nutrition Enhancement Programme, through which 16,000 products are assessed for levels of trans fats, saturated fats, sodium, sugars. Another remarkable initiative was undertaken with the Lifebuoy brand hygiene programme, *Swasthya Chetna*. It educated 120 million people in nearly 51,000 rural villages of

India about daily hygiene practices. (Since then, Lifebuoy has been strongly committed with handwashing behavior change programmes worldwide).

On the other hand, sustainability meant planet preservation and, hence, environmental performance management. Partly through investments in research and innovation technologies able to reduce the quantity of resources needed for producing goods; an example is provided by Small & Mighty, the first super-concentrated liquid laundry detergent that uses one-third the packaging, one-third the water and one-third of the transport of dilute liquids. Partly, by progressively driven business towards sustainable choices in raw materials sourcing as well as waste disposal. For instance, Unilever committed itself to purchase palm oil and tea for its products from certified sustainable and ethical sources.

Simultaneously, as consumers' purchasing habits has been shifting towards more social and environmental friendly choices in the compelling era of globalization, Unilever has been increasingly embedding sustainable thinking into day-to-day corporate strategy staunch that it would be the right approach for a long lasting, responsible growth. Since then, the overall strategy for sustainability, the Compass, sets out a constant and long term path for Unilever which, in 2010, sharpened its commitment with the launch of Unilever Sustainable Living Plan, focus of the chapter.

Currently, Unilever is a € 53 billion giant in the Fast Moving Consumer Goods industry with a global scale reaching more than 190 countries. Through its huge brand portfolio diversified into four product categories – Home Care, Personal Care, Foods and Refreshments – puts the company into contact with 2 billion consumers everyday, being part of people habits and lifestyles. Leveraging on that Unilever has been able to convey its vision: making sustainable living a common place.

5.1.2 Mission, values and corporate culture

The founders, William Lever and Samuel van den Bergh did not just create powerful consumer brands, they also built "a business with a mission to act as agent of social change"53. Indeed, when initially converted soap and margarine into mass products, they were able to enter thousand people everyday life by affecting two vital dimensions: nutrition and hygiene. Ever since then, Unilever has been evolved into a sustainable and purposedriven company with a strong corporate culture that ties together a huge number of businesses with a unique and common vision: make sustainable living a common place. This longstanding commitment has been progressively sharpened and extended to embrace a wide and innovative concept of sustainability able to pursue goals and tackle challenges linked to the major global issues - social, economical and environmental.

The ability of adopting profitable but responsible business practices enables the company to effectively pursue an outstanding growth while driving a positive change: reducing the environmental footprint and improving the social impact. Unilever CEO Paul Polman affirms that:

"We cannot close our eyes to the challenges that the world faces. Business must make an explicit and positive contribution to addressing them. I'm convinced we can create a more equitable and sustainable world for all of us by doing so"⁵⁴.

Therefore, sustainability is vision and strategy at the same time. Developing a responsible and sustainable business model is not a philanthropic approach; it would be the only choice currently available to achieve a long lasting growth preserving the planet and the people living on it. Business, according to Unilever thinking, should be the solution not the problem. By leveraging the

⁵³ Maljers Floris A., *Inside Unilever: The Evolving Transnational Company*, 1992, Harvard Business Review;

corporate global reach and inspiring people to take a collective action, it is possible to make a big difference for a brighter and healthier future.

In fact, in line with that, the company clearly and loudly states to work for enhancing people life by "supporting sustainability and providing our consumers around the world with the products they need to look good, feel good and get more out of life"⁵⁵. Recognizing the inter-relationships between nutrition, hygiene and personal care with feeling good and looking good, Unilever strong science capability and understanding of the lives of consumers around the world has always been implemented to improve the quality of life and well-being on the planet.

In 2004 the company declared that:

"Our Vitality mission connects us to consumers as citizens. We will pursue the goals of sustainable development where we have the greatest impact, through our sustainability initiatives in fish, agriculture and water. We will play our part in society as a responsible business and engage with the communities we serve."

Being able to transform goals into actions while clearly communicating it to the public helps Unilever to comply with its mission. Increasing transparency about their values, priorities and initiatives boosts the company reputation and assure stakeholders engagement overtime.

On one hand, a good example of that is the particular logo Unilever designed in 2005. The visual representation of the company's identity and its commitment

⁵⁴ Declaration of Unilever CEO Paul Polman, Unilever Website, Section Our Leadership: https://www.unilever.com/about/who-we-are/our-leadership/

⁵⁵ Declaration proceeding from Unilever Website page: https://www.unilever.com/about/who-we-are/purpose-and-principles/
56 Unilever 2003 Annual Report & Accounts, retrieved on Unilever Website;

consists of 25 icons⁵⁷ intricately woven together to form a U; each icons expresses an aspect of the business with a deeper meaning connected to company's sustainable vision of doing business. For instance, the hand with the flower next to it, is deemed to represent sensitivity and care, as well as skin and touch solutions; the DNA double helix, meant to stand for life, bio-science, and healthy living. Similarly, the palm tree was meant to symbolize paradise, as well as palm oil, the product which initially started the company back in 1929.



On the other hand, realizing ambitious goals not only requires company's operational expertise across different businesses but also a powerful corporate governance. The essence of its commitment to good governance was outlined in 1995 with the Corporate Purpose statement according to which doing business requires "the highest standards of corporate behaviour towards everyone we work with, the communities we touch, and the environment on which we have an impact". Around that, are set the core values governing business everyday life and the interaction among colleagues, with customers and consumers: integrity, responsibility, respect and pioneering.

Unilever considers its reputation of doing business according such values an asset, as real as people and brands and dates back to the very origins of the company. A pioneering spirits and a drive for continuous improvements belong to Unilever DNA but, with the words of CEO Paul Polman, "they must always be underpinned by a commitment to operate with integrity and transparency, a

⁵⁷ All the icons are represented and explained in Annex 1 attached at the end of the present dissertation;

respect of human rights and a responsibility for the societies and environments in which we operate"⁵⁸.

To achieve harmonization between values and economic interest, high standards of conducts and guiding principles are required. In line with that, the Corporate Purpose provided a ground where Unilever codes are developed taking in to account international organizations guidelines and conventions (ILO, ISO and OECD).

The Code of Business Principles is an ethical statement describing operational standards to be followed worldwide in managing all the aspects of business. The Annex 2 attached reports the 14 principles guiding Unilever's members daily activities.

Those principles are vigorously supported by 24 internal mandatory Code of Policies providing a framework of *Musts* and *Must Nots* that translates standards into concrete, compulsory behaviours.

5.1.3 Organizational structure, strategy and performance

Unilever N.V. and Unilever PLC, together with their respective subsidiary companies have, since they born in 1929, managed to operate as a single economic entity, though remaining legally separated with different shareholders' constituencies and incorporated under different laws - NV under Netherlands regulation and PLC under the laws of England and Wales.

Both NV and PLC are holding and service companies whose business activity is carried out by their subsidiaries around the world.

For a dual structure to operate as a single economic entity, it is of profound significance ensuring the unity of management and operations as well as the sharing of common purpose and mission. This is achieved by the settlement of

⁵⁸ Declaration of Unilever CEO Paul Polman, Unilever Website, Section Our Leadership: https://www.unilever.com/about/who-we-are/our-leadership/

a series of agreements, known as Foundation Agreements⁵⁹, and codes – The Code of Business Principles and Code of Policies.

In fact, on the one hand the Foundation Agreements, ruling upon topics such as Boards of Directors constituency, conflicts of interest, flows of information and know-how between global subsidiaries, shareholders' dividends and rights, provide all the covenants necessary for Unilever to carry on its operations and strategies on a daily basis.

On the other hand, upon this common global operating strategy, the Code and Code policies, by outlining business principles and practices, draw the standards of conduct necessary to fulfil its Purpose holistically. Then, country' affiliates tailor them according to local settings but any standards will be less rigorous than those contained in this Code.

The long tradition of expanding the business through both export and local production as well as the wide array of its products portfolio lent Unilever a nature of transnational company thinking globally but acting locally. In fact, the size and the scope of Unilever requires a kind of organizational design able to handle a far-flung number of units without loosing effectiveness and consistency in the management decision process. Striving for unity and diversity at the same time is achieved through the combination of a decentralized structure – providing deep understanding of local markets and faster decisions – with a degree of centralized control – ensuring standards and business practices embodied in a well defined corporate culture that ties together operational units around the world.

In line with a common vision and strategy set at global level through Foundation Agreements and Codes, Unilever subsidiaries develop inner initiatives, practices and procedures to meet local specific goals and performance indicators.

Specific contents of Unilver Foundation Agreements available on the following Website page: https://www.unilever.com/investor-relations/agm-and-corporate-governance/legal-structure-and-foundation-agreements/index.html

The product type divisional structure defining the four categories – Home Care, Personal Care, Foods and Refreshment – is supported by a geographical organization of its business showing macro areas (and sub-areas) that gathers operating companies at country-level.

These are:

- Africa
- Americas
- Asia Pacific
- Europe
- Middle East

In each country subsidiary the organizational structure is slightly different reshaped. The rationale is to facilitate the decision making process within it and the execution of tasks and objectives regionally set as a consequence of the products and brands available in the country.

Therefore, product divisions are responsible for brand development, innovation and R & D at global level, while regions focus on market execution of business operations by deploying brands and innovations and, by managing customers' satisfaction according to local strategies.

Below we report some indicators⁶⁰ giving and insight about how Unilever vision and strategy translate a responsible growth into a profitable financial performance reaching in $2015 \in 53,3$ billion total turnover.

⁻

^{60 2015} Full Year Results Report available on Unilever Website.

Unilever supports it financial reporting with not generally accepted accounting principles (GAAP) such as Underlying Sale Growth (USG), Core Operating Profit (COP) and Free Cash Flow (FCF), believing that these measures are more uselful for investrors and other shareholders to understand underlying business performance.

UNILEVER GROUP

+	4			
	T			

	T
UNDERLYING SALE GROWTH USG refers to the increase in turnover for the period resulting from acquired brands that are launched in countries where they were not previously sold but excluding any change resulting from acquisitions, disposals and changes in currency.	+ 4,1 % 2014: 2,9%
CORE OPERATING PROFIT	€ 7,8 billion
COP shows the operating profit before the impact of business disposals, acquisition and disposal related costs, impairments and other non-core items	2014: 7,02 billion
FREE CASH FLOW	€ 4,8 billion
FCF represents the liquidity available for distribution of dividends, repayment of debt or to fund strategic initiatives, including acquisitions, if any.	2014: € 3,1 billion

CATEGORIES

	HOME CARE	FOODS	PERSONAL CARE	REFRESHMENT
TURNOVER	€ 10,2 billion	€ 12,9 billion	€ 20,1 billion	€ 10,1 billion
USG	+ 5,9 %	+ 1,5 %	+ 4,1 %	+ 5,4 %

GEOGRAPHICAL AREAS

	ASIA/ AME/ RUB	THE AMERICAS	EUROPE
TURNOVER	€ 22,4 billion	€ 17,3 billion	€ 13,6 billion
USG	+ 4,6 %	+ 6,6 %	+ 0,3%

5.1.4 Brands and products

Unilever operates in the highly competitive fast moving consumer goods sector – a sector which is subject to an array of global pressures and volatility. In fact, changing tastes, social norms, population shifts and wealth distribution affect consumers demand for such products. At the same time, the impact of digital technology and the sharpen competition between large multinational companies make it difficult to succeed.

In that industry context, Unilever built a prestigious business owning more than 400 brands, "that aim to deliver consistent, competitive, profitable and responsible growth supported by investment in innovation and marketing".

At the top of the list are 13 brands having annual sales of one billions, the so called $13 \in 1$ billion brands:

- Axe
- Dove
- Heartbrand
- Hellmann's
- Knorr
- Lipton
- Lux
- Magnum
- Omo
- Rama
- Rexona
- Sunsilk
- Surf

Being a purpose-driven company means for Unilever developing brands that address social and environmental concerns while performing affordably. In other words, products cannot improve the lives of people who buy them while ignoring the working conditions of the people making them or harming the planet. On the contrary, products attributes and features must reflect

https://www.unilever.com/sustainable-living/sustainable-living-news/news/sustainable-living-brands-leading-unilever-growth.html

⁶¹ Unilever website, Section Sustainable Living Brands:

improvements towards sustainability.

To integrate sustainability into brand heart, the company has created a definition of what makes a Sustainable Living Brands according two criteria: having a clear social or environmental purpose and delivering products that comply with one or more targets set in the Sustainable Living Plan. An example is given by Lipton brand.

Its purpose is to "support farmers by working to improve their livelihoods and those of their families while protecting the planet for the future" Concretely, Unilever commits to source all of its tea from sustainable, ethical sources, asking the Rainforest Alliance audit its tea suppliers worldwide. By 2015 Lipton tea bag blends were totally sourced from Rainforest Alliance Certified – a seal testifying agricultural practices that conserve land, improve livelihoods, and protect workers and communities.

Finally, it is important to underline that Sustainable Living Brands accounted for almost half of the company total growth in 2015 and they are still growing faster than the rest of the business

5.2 Embedding sustainability into corporate strategy

The previous overview should have clarified that, for Unilever, sustainability is not an aspect of business – like carry on practices of social responsibility or resources preservation – but is the common ground linking together economic growth, society and environment. And, in line with that, Unilever ambitiously embraces a vision for its future growth: to double the business, whilst reducing the environmental footprint and increasing positive social impact.

For such reasons, the business strategy for sustainability corresponds to the

_

⁶² Unilever Report on USLP progress 2015, retrieved on website;

⁶³ The Rainforest Alliance is an NGO working to conserve biodiversity and ensure sustainable livelihoods by transforming land-use practices, business practices and consumer behaviors.

overall corporate four pillars – brands and innovation; marketplace, continuous improvement; and people – that frame Unilever business model. In fact, building strong brands, continuously developing innovative solutions alongside the global value chain as well as investing in people, are the levers to pursue the sustainable living goal, at the core of the model. At the same time, integrating sustainability into each of the levers, is how Unilever derives profit and delivers value for society.

On one hand sustainability contributes to business success in number of ways. It provides innovation and market opportunities to rethink products design and brand characteristics in order to meet consumers changing needs. Strengthening the connections between consumers and the products they buy translates into sales growth and brand awareness. Furthermore, the adoption of sustainable practices in business operations, materials sourcing and products manufacturing create internal efficiencies and cost saving advantages.

On the other hand, Unilever exerts a catalyst role of global issues such as deforestation, water scarcity and under-nutrition that challenge the society as a whole. The company has been promoting programmes and initiatives in partnership with governments, NGOs and suppliers to lead a systemic change in business practices that will be sustainable, but also profitable, in the long term.

Unilever economic, social and environmental performance has been widely recognized by external agencies and organizations. In fact, in many ratings and rankings, carried on by environmental specialist groups and responsible investments analysts, it achieved top positions and gained great score levels, often leading the industry group.

5.2.1 Unilever Sustainable Living Plan (USLP)

Launched in 2010, USLP is the blueprint for sustainable growth. Being a strategic response to the main challenges faced in doing business, it identifies those areas in which Unilever has concretely an opportunity to address social

and environmental issues whilst generating profit. The Plan, that spans the entire brand portfolio at global level, outlines three big goals:

- Improving health and well-being
- Enhancing livelihoods
- Reducing environmental impact

To each of them belong sub-topics towards which Unilever has committed by setting out strategies, techniques and specific targets driving its social, environmental and economic performance.

For the interest of our dissertation, we will focus on the environmental side of the Plan, though the picture below should give an insight about the USLP overall structure.



Source: Unilever Website: https://www.unilever.com/sustainable-living/the-sustainable-living-plan/our-strategy/

The green boxes clarify that reducing its impact on the planet, means for Unilever to work on:

- Greenhouse gas emissions of products;
- Water associated with products manufacturing and consumers' use;
- Waste linked to products disposal;
- Sourcing of raw materials;

A business rationale underpins this multi-faceted task: managing the environmental performance will provide economic advantages in terms of reducing risk (by supply raw materials from sustainable sourcing), cutting costs (through manufacturing and distribution efficiencies), appealing

more consumers (with sustainable brands), and hence, improving corporate reputation.

Each of the strand aimed at reducing Unilever footprint on the planet are summarized below. They share a holistic approach based upon Product Life Cycle Assessment. As environmental externalities occur at every stage of the value chain – from raw materials, manufacturing and transport to consumer use and disposal – this analysis enables to understand critics aspects and therefore to prioritize business actions and resources.

Greenhouse gases (GHG)

By progressively eliminating fossil fuels from operations and supply chain, Unilever aims to play a role in tackling climate change. To pursue the big goal of halving greenhouse gas emissions by 2030, the company strategically sets sub-targets and and develops feasible solutions.

Specifically, there are five main objectives pursued to address GHG issue while improving its internal efficiency. The scheme reports current actions and some of the relating achievements.

1. Becoming carbon positive in manufacturing

Actions in progress

- Purchasing all electricity from renewable sources by 2020;
- Eliminating coal from the energy mix by 2020;
- Sourcing 100% of total energy across all manufacturing operations from renewable energy by 2030;
- Developing bio-energy technologies;

Achievements by 2015

- Reduction of manufacturing GHG footprint by 39% per ton of production versus 2008 baseline;
- The 28% of energy requirements for manufacturing came from renewable sources;

2. Reducing GHG from washing clothes

Actions in progress

- Reformulating cleaning products to provide greater performance at lower temperatures;
- Focusing market innovations on liquid detergents that have lower GHG footprint;
- Developing lower impact powders by removing or reducing components with high GHG impact;

Achievements by 2015

- Over 95% of laundry powders in Unilever top 14 countries have been reformulated, achieving a reduction of 15% in greenhouse gas emissions;

3. Reducing GHG from transport

Actions in progress

- Reducing truck mileage by sharing loads with partners
- Employing alternative transport such as rail or ship;
- Investing in alternative fuels such as Liquefied Natural Gas (LNG) but also in long term fuel sources such as hydrogen and biogases;

Achievements by 2015

- 22% improvements in CO2 efficiencies;
- Unilever Europe adopted a new Transport Management System optimizing transport flows between suppliers, factories, warehouses and retailers;

4. Reducing GHG from refrigeration

Actions in progress

- Adoption of freezer cabinets that use climate-friendly natural hydrocarbon refrigerants;
- Investing in new generation freezers with energy savings of up to 60%;
- Working with governments, NGOs, industry groups and other manufacturers to develop and promote more environmental-friendly solutions;

Achievements by 2015

- Total number of hydrocarbon freezer purchasing amounts to 2 billion;
- Founder member of Refrigerants, Naturally!, a multistakeholder group established in 2004 to promote a rapid shift away from the use of HFCs towards natural refrigerants;

5. Reducing energy consumption in offices

Actions in progress

- -Working to halve energy consumption per occupant by 2020 through a combination of local site efficiency improvements, personal computer & printing monitoring, ecofriendly buildings development;
- Setting new standards of energy efficiency in buildings in partnership with he World Business Council on Sustainable Development

Achievements by 2015

- 27% reduction in energy (kWh) purchased per occupant since 2010;
- -Numbers of local initiatives across target sites focused on heating, ventilation and air conditioning (HVAC), lighting and waste management;

Water use

The product categories in which Unilever operates consume more than 90% of the water used at home – from washing dishes to cleaning clothes, hair and skin. Yet today billions of people around the world live in water scarcity conditions but, at the same time, consumer demand for water has doubled since 1950. This situation boosted company's efforts in areas where it can exploit business opportunities while contributing to water scarcity. On one hand, focusing its expertise and resources on the development of innovative products, devices and services that meet domestic water needs in water-stressed regions (the most under-served group of consumers but the best aligned to its business growth priorities) without compromising the product experiencing. On the other hand, proactively map and manage water use alongside the supply chain as well as in it own factories across the world.

We report in the following scheme remarkable targets and actions set out by USLP to address the water issue.

1. Reducing water abstracted by manufacturing sites

Actions in progress

- Initiatives at all sites to reduce, reuse and recycle water;
- Metering, Monitoring and Targeting programmes developed across factory network and subsidiaries;
- Water efficiency integration at all levels in new factories to be assessed against more rigorous eco-efficiency targets;
- Extra focus on water efficiency investments in water-scarce locations.

Achievements by 2015

- Reduction of 37% in the total volume of water abstracted for use in manufacturing compared to 2008;
- Zero liquid discharge factories such as in Brazil where an homecare site has installed a water recycling centre, which treats and re-uses 100% of our wastewater for factory operations.;

2. Helping consumers maximize water

Actions in progress

- Providing 50 million households in water-scarce countries with laundry products that deliver excellent results with a less number of rinses by 2020;
- Combining market research about consumer behavior and water consumption habits with innovative technology to develop new products and formulations for household cleaning, skin cleansing and oral and hair care that reduce the use of water;
- Working in partnership with NGOs to rise awareness of water scarcity in rural areas while boosting changes in people washing and showering habits;

Achievements by 2015

- Reduction of 37% in the total volume of water abstracted for use in manufacturing compared to 2008;
- -One Rinse products were used in 4.9 billion washes in just over 50 million households worldwide;
- Progress in self-foaming hand and body wash products: Lifebuoy and Lux brands use 18% and 11% less water versus regular products because no water is needed for lathering;

3. Reducing water use in agriculture

Actions in progress

Achievements by 2015

- Working on comprehensive plans with suppliers and partners to reduce the water used in growing crops in water-scarce countries;
- Supporting farmers with good water management practices through sustainable sourcing programmes in order to increase the quantity and consistency of yields whilst reducing water use;
- The suppliers self-assessment software system (GreenLight Assessment) adopted in 2011shows continued reduction in irrigation water use per tonne of crop grown, especially tomato suppliers in the top five sourcing regions;

Waste and Packaging

The ambition of becoming a Zero Waste Business committed Unilever to continuous improvements in the adoption of Reuse, Recycle and Recover practices both in manufacturing sites and offices around the world. To reduce waste at source and increase products recyclability, the company apply "circular economy" mindset to its business, according to which materials can be regenerated and constantly flow round a closed loop system, rather than being used once and then discarded. Such an approach, though particularly challenging, will reduce externalities on the planet while providing economic benefits for the company. In fact, investing in practices that extend products life and repurpose valuable inputs as well as enhancing waste management processes across factory network will eventually provide cost savings in materials, energy, transport and disposal. Innovation is the key to handle waste packaging issue together with industry collaborations and consumer education programmes.

Finally, to further improve waste reduction targets and to enhance environmental management of business operations, Unilever cooperates with suppliers and engages employees in waste-related initiatives.

Actions taken to halve waste associated with products disposal are gathered below. Main achievements are also reported.

1. Reducing waste from manufacturing

Actions in progress

- Developing replicable solutions for tackling waste that transfer effectively from one factory to another;
- At the same time, working with local teams to launched projects and initiatives according to geographical areas needs and characteristics;
- Selling factory leftover materials to

Achievements by 2015

- Over 240 factories across 67 countries achieved our target of zero non-hazardous waste to landfill;

provide energy to other industries or to be differently reused in other factories;

2. Reducing and Recycling packaging

Actions in progress

- Innovations and sustainable design will allow to reduce packaging by one third through developing concentrated versions of products, lightweighting and optimizing materials;
- Working in partnership with industry, governments and NGOs to increase recycling and recovery rates through infrastructure development and investments in lower environmental impact technologies;

Achievements by 2015

- Advanced molding technology has allowed us to reduce the plastic component in bottles by up to 15% versus the previous bottle;
- Conversion of Surf detergent products from carton board to flexible pouches eliminates unnecessary packaging;
- Launch of compressed deodorants with aerosol technology that has 50% less gas and 25% less packaging;
- Around 4,900 tons of postconsumer recycled materials are incorporated into rigid plastic packaging;

3. Reducing non-manufacturing waste

Actions in progress

- Working with suppliers and throughout the company to extend the Zero Waste approach with a double aim: to reused, recycled or recover the 90% of global nonmanufacturing waste; and to send zero non hazardous waste to landfill at all of in-scope sites in 21 countries; Focus on in-office initiatives to
- Focus on in-office initiatives to integrate circular economy thinking and increase recyclability;

Achievements by 2015

- 400 non-manufacturing sites had eliminated non-hazardous waste to landfill;
- The 93% of our office waste is reused, recycled or recovered; -As consequence of Global Print Programme and other internal initiatives the paper consumed per occupant reached a 55% reduction against 2010;

Sustainable Sourcing

Over 15 years ago, Unilever started a pioneering Sustainable Agricultural Programme to boost a widespread adoption of sustainable farming methods sure that it would provide business opportunities while preserving the planet's natural resources. In fact, on one hand sourcing sustainably has the potential to both increase yields considerably and to improve quality of final food products such as sauces, soups, dressing or ice creams. On the other hand, by limiting environment depletion, sustainable agricultural practices reduce risk and volatility in raw material supply chain. Besides, they might produce economic and social benefits to farmers and the surrounding communities.

Finally, communicating the value that lies behind sustainable sourcing to consumers, enables the company to influence their purchasing habits towards products sustainably sourced, which ensures business growth.

Considering that half of its supplies come from farms and forest, Unilever started focusing on the following top agricultural materials (accounting for around 70% of it business) with the bold goal of sustainably sourcing 100% of company's raw materials:

- Palm oil, Sunflower oil, Rapeseed oil
- Cocoa and Sugar
- Soy
- Tea
- Fruit and Vegetables
- Dairy
- Eggs

To drive transformation in each of those sectors while increasing traceability and transparency of its farming supply chain, Unilever relies on two main tools: the SAC (Sustainable Agricultural Code) and the RSP (Responsible Sourcing Policy).

The former, collects good practices for agriculture according to sustainability standards as well as mandatory requirements that Unilever's suppliers, and farmers working with them, must follow and comply. The latter, provides benchmarks for continuous improvements alongside a ladder with three

subsequent performance levels, Mandatory Requirements, Good and Best Practices, that suppliers must progressively adhere to.

At the same time, strategic partnerships with NGOs, local governments and international institutions have been established to invest in small farmers' sustainable choices as well as specific projects across company's brands have been launched to continuously widen the range of raw materials sustainably sourced.

5.3 Managing the environmental performance

5.3.1 Life Cycle Assessment

As we have often underlined, environmental performance is not considered as a separate dimension in the overall corporate strategy for sustainable business; it is indeed one of the three pillars that together drive Unilever responsible growth in the long-term.

For sure, to pursue the ambitious goal of halving its impact on the planet, the company had to measure its footprint as a business and, one of the technique mostly used at Unilever is the Life Cycle Assessment of products (PLCA) – an evaluation of the externalities deriving from sourcing raw materials, product manufacture, distribution, consumer use and disposal.

PLCA has a threefold function: it is an ongoing basis to work with partners in the development of new methods to broaden the effectiveness of impact-based approaches; it provides insights and knowledge to guide product developers during the innovation process of product design: but first and foremost, it is an assessment of existing products lifecycle phases, evaluated to understand their burden on the planet according environmental-related aspects. In other words, it measures Unilever's products GHG footprint, water employed, as well as waste and packaging footprint.

As example, we report below greenhouse gas footprint infographic available on Unilever website.



 $Source: Unilever Website $\underline{\rm https://www.unilever.com/sustainable-living/thesustainable-living-plan/reducing-environmental-impact/greenhouse-gases/Ourgreenhouse-gas-footprint/$

This calculation refers to the period 2014-2015 and focuses on 14 key countries; it gathers data for a large group of products portfolio, including all sub-categories: Baking, Cooking and Spreads, Beverages, Deodorants, Dressings, Hair Care, Household Care, Ice Cream, Laundry, Oral Care, Savoury, Skin Care and Skin Cleansing.

Although it is a representative overview of the total impact, the analysis shows that the largest contribution to Unilever GHG footprint is given by earliest stage of raw materials sourcing and consumer's use of final products.

According to these results, therefore, it seems that as far ad possible Unilever works hard to manage its environmental performance within manufacturing and distribution dimensions, whereas the challenge is twofold: cooperation with raw materials suppliers to improve their performance and communication with consumers to positively change they usage habits.

5.3.2 Working with suppliers

To drive sustainability down the supply chain, consistently with USLP, suppliers must be selected according to rigorous criteria; in other words, suppliers are required to demonstrate that all their activities (and the ones of contractors and third parties) are align with Unilever sustainability requisites of

"doing business in a manner that improves lives of workers across our supply chain, their communities and the environment".

For Unilever, there are two main routes to do that, either through self-assessments against SAC and RSP, or by working towards one of the recognized external certification standards.

As we explained before, SAC and RSP issue both mandatory requirements and recommended practices. The formers, must be complied by all suppliers working with Unilever, the latters are provided to guide further improvements towards sustainability beyond the basics. In line with that, suppliers can either maintain their own codes of conducts and policies, as long as they are proved to be consistent with SAC and RSP, or can directly abide by mandatory requirements set out in Unilever Codes.

The company, verifies the alignment as well as the compliance through suppliers' self-declarations reported in the *GreenLight Assessments*⁶⁵, a digital software enabling the company to track and monitor progress against Sustainable Agriculture Code while creating evidence-based improvement plans for suppliers. The tool has a twofold function; it is a way for Unilever to improve visibility and tracking of its fresh supply chain while working out whether raw materials qualify as being sustainable according SAC key indicators; at the same time, by allowing information to be shared both up and down the supply chain, assessments ensure a constructive collaboration during visits and audits. In fact, at the end of each year, Unilever chooses a sample of suppliers to control whether declarations reported in the *GreenLight Assessments* fit with the actual performance shown in site.

As far as it concerns the other route, Unilever recognizes several certifications to be fully compliant with its sustainable sourcing standards. Among them, Rainforest Alliance (Sustainable Agriculture Network standard), Fairtrade, Marine Stewardship Council (MSC), Forestry Stewardship Council (FSC) and any organic standard issued by International Federation for Organic Movements (IFOAM). Any other certification scheme, needs to be

_

⁶⁴ Responsible Sourcing Policy Report, retrieved on Unilever Website;

⁶⁵ The GreenLight Assessment is an operational tool provided Muddy Boots sofwtare;

benchmarked against the Sustainable Agriculture Code to ensure suppliers are correctly implementing their efforts in the sustainability journey.

Furthermore, in order to make that journey a tangible mutual business success, Unilever aims at establishing long-term partnerships by means of which suppliers worldwide are supported in their innovative and responsible choices. On one hand, providing them with as much as possible tools to improve their skills and capacities; for instance, Unilever created a global collaboration platform called SupplierNet (for members only), whereby customized reports, information and metrics are at suppliers' disposal to enhance their operational and commercial activities.

On the other hand, by launching programmes and project across its portfolio brands, such the Knorr Sustainability Partnership project we will discuss in the last part of the chapter.

5.3.3 Working with consumers and employees

Pressure from individuals, governments and the wider communities, has led to an expectation that companies reduce their impact on the planet in doing business. Since over a decade, environmental (and social) concerns are driving consumers towards more sustainable purchasing choices but, at the same time, many researches show that a big portion of negative externalities on the planet stems indeed from consumers' use of products.

Therefore, a great focus must be placed on consumer; deepen the knowledge about people needs and attitudes provides a twofold opportunity: translating consumers trust and interests into sales growth while engaging them in the sustainability journey.

Unilever, thanks to its global scale and wide array of product categories, has the power and the opportunity to help people changing daily consumption patterns. According to the company, in fact, behavioural change is fundamental to achieve the goals set out in the Sustainable Living Plan.

In line with that, it has shaped a strategy based on three main pillars: constantly researching to understand consumers needs, habits and preferences; investing on technology and innovations to deliver products with high level of performance and sustainability; and communicating the value of sustainability beyond them to rise consumer awareness.

Since 2011 has adopted the so called Five Levers for Change approach to increase the potential of managing consumers impact on product lifecycle through a sustained behaviour change. It includes a set of principles and tactics to make the change understood, easy, desirable, rewarding and finally a lasting habit.

We look, for example, at the efforts Unilever undertook to manage water footprint associated to consumer use of its laundry products.

First of all, by using innovative technology and design, it creates products that require less water in use without undermining the cleaning performance: correct dosing, low-lather technologies and easy rinse formulations make it easy for consumers to wash clothes while saving waters and often money.

Secondly, effective brands communication helps them understanding the positive effect that can arise from sustainable behaviours such as, using the lowest possible temperature and avoiding pre-wash cycle. Finally, in water scarce countries, Unilever has launched numbers of local campaigns and programmes aimed at showing people how sustainable habits fit to enhance the overall quality of life.

Managing its environmental performance seems to be for Unilever not just a matter of manufacturing factories' boundaries but a responsible growth also needs consumers' engagement to sustainably close the product lifecycle.

Nevertheless, employees too have a role in driving such growth ahead. On one hand, specific policies and tools support teams working life; both managers and employees are provided with training and learning materials to improve their understanding and capabilities on sustainability. On the other hand, projects and initiatives are developed in each corporate function in order to strengthen Unilever sustainable culture and values.

5.4 Sustainable Agriculture Goal

5.4.1 Mainstreaming sustainable agriculture

Today, while one in nine people are living in under-nutrition conditions, the global food production will have to increase by 50% to meet the growing need for food of a population rising towards the predicted 9 billion by 2050. How is it possible in a world of finite resources?

Furthermore, food produced but lost or wasted, environmental degradation and a changing climate are all putting additional strains on agricultural productivity and threatening food security. This scenario calls for a change in the global food supply system, which should start from wide spreading agricultural methods that are sustainable not only for the planet but also for the farmers involved around the world. In order to mainstream sustainable agriculture, working within the boundaries of a company supply chain is just a part of the strategy, it requires also a shared path for both private and public sectors. In line with that, Unilever has been cooperating with industry partners, NGOs and governments at both global and local level to build a common framework of sustainable agriculture whereby businesses can exert a key role in extending policies and practices for responsibly sourcing their raw materials.

One of the major results achieved in collaboration with other consumer goods companies is the Sustainable Agriculture Initiative (SAI) Platform. It is a non-profit organization co-created by Nestle, Danone and Unilever in 2002, to promote knowledge and best practices sharing about the implementation of sustainable agriculture practices involving stakeholders throughout the food value chain. In other words, SAI Platform members (currently more the 90) are actively engaged in co-developing tools and guidance to support global and local sustainable sourcing and agriculture methods.

The experience gained over the past fifteen years, led Unilever to develop its own framework of what sustainable agriculture means according to 11 social, economic and environmental indicators:

- Soil Health: improving the quality of soils and habits to support plant and animal life;
- Soil Loss: reducing soil erosion that can lead to loss of nutrients;
- Nutrients: developing proper and efficient usage;
- Pest Management: reducing the use of pesticides and chemical products;
- Biodiversity: helping improve the surrounding ecosystem;
- Farm Economics: improving product quality and yield profitability;
- Energy: improving energy efficiency and using renewable resources;
- Water: efficiently managing crops irrigation, avoiding loss and contamination;
- Social and Human Capital: ensuring people livelihood capacity as well as enhancing farmer's knowledge and training;
- Local Economy: helping local communities benefit from sustainable agricultural practices;
- Animal Welfare: ensuring animal life standard is in line with The Five Freedoms⁶⁶ defined by the Farm Animal Welfare Council;

These indicators represent relevant agriculture aspects that should be managed in order to achieve "the efficient production of safe, high quality agricultural products, in a way that protects and improves the natural environment, the social and economic conditions of farmers, their employees and local communities, and safeguards the health and welfare of all farmed species"⁶⁷. In 2010, the framework was formalized into Sustainable Agriculture Code which contains, for each indicator, a wide spectrum of standards and practices

⁶⁶ The Five Freedoms were developed within the UK Farm Animal Welfare Council; they outline five aspects of animal welfare under human control: Freedom from hunger or thirst; Freedom from discomfort; Freedom from pain, injury or disease; Freedom to express (most) normal behavior; Freedom from fear and distress.

⁶⁷ Definition of sustainable agriculure according to SAI Platform, available on the website: http://www.saiplatform.org/

to be applied to all Unilever's suppliers of agricultural goods, the farmers producing them and contractors working on farms.

Some of these are mandatory rules (meaning that Unilever cannot accept otherwise) asking for deep and rigid requirements, some other are just recommendations or guidelines supporting suppliers in the implementation of sustainable farming methods.

We report an example from the Code referred to "animal welfare" indicator as follows; the first is classified as "mandatory" (non compliance is unacceptable to Unilever), whereas the others are "expected" (they are recommended as a good practice):

Physical abuse	Direct physical abuse of animals is prohibited. This includes using excessive physical force on animals or deliberately causing pain or injury.	Mandatory
Training	Managers and stock keepers must be trained in aspects of animal husbandry - this includes care of animals at all ages, humane handling, feeding and how to deal with sick or injured animals.	Expected
Routine procedures	Routine procedures must be carried out in such a way as to protect animals from fear and distress. This includes procedures such as milking, calving (cattle), farrowing (pigs), insemination and thinning (poultry).	Expected

Source: Sustainable Agriculture Code (SAC)

The application of SAC is a guarantee not only for the environment or for the consumer, but also for all people working in the supply chain by issuing standards that relate to local farmers and communities' social aspects. On one hand, they recommend practices for cooperation, knowledge-sharing and good networking within and between suppliers. On the other hand, they focus on aspects such as responsible employment and training practices, as well as the provision of a safe and healthy working conditions.

SAC is ambitious indeed but this way even the smallest dairy farm in the most remote African area is encouraged to stick to a sustainable policy. It represents a holistic approach to sustainable agriculture, wide-ranging in scope, applying to diverse geographies and farming systems from smallholders to large plantations.

Its implementation is nevertheless very challenging due to diverse political and social contexts. In developed world, government subsidies and strong legal

frameworks support farmers' commitments to sustainability, even if on the other side farmers are unwilling to withstand more regulations because they already feel overburdened by administrative tasks; elsewhere in developing countries where these structures are not present to the same extent, smallholders may have neither the training nor the resources to integrate sustainable practices into their farms.

Being SAC a tool to commit suppliers and farmers to Unilever sustainability journey, they are to demonstrate the compliance with minimum standards of performance as well as the continuous improvements in their farming methods over time. As explained previously, this is done either through self-assessment against indicators standards or through third party certification consistent with SAC benchmark.

5.4.2 KNORR Sustainability Partnership

Within the framework of Sustainable Agriculture Programme, food brand Knorr plays a primary role in pursuing the bold goal of sourcing Unilever with 100% sustainable raw materials, by supporting and promoting the adoption of sustainable farming practices in its suppliers' network worldwide on the basis of SAC.

Knorr commitment is embodied in the Knorr Sustainability Partnership which enables the brand to establish even closer relationships with its suppliers, as they work together to address the challenges of sustainable agriculture. According to Knorr vision, food products quality strictly depends upon the healthy of soil, the amount of pests used as well as the farming methods employed in growing plants and crops. In line with that, striving for sustainability in agriculture would help Knorr delivering consumers with natural ingredients "at the roots of great-tasting plates".

104

68

Knorr target is to source all vegetables, herbs, meats and spices from sustainable sources by 2020; in order to do that, it developed two strategies:

1. They have allocated a Fund of one million Euros each year to support the Partnership. They will use this fund to co-invest with their suppliers and farmers in knowledge and equipment to accelerate the implementation of sustainable practices. Specifically, Knorr will invest 50% of any agreed project budget, matched by an equivalent investment from the supplier and/ or grower; this is critical to support farmers and suppliers on complex sustainable agriculture projects that they are unable to tackle alone.

To agree any budget, projects are judged by some criteria, among them:

- bring new knowledge to the industry;
- bring suppliers together in a region to tackle a specific issue;
- deliver a positive return on investment for all stakeholders;
- being relevant and interesting to consumers of Knorr products and providing tangible stories.
- 2. They recognize the best sustainable agricultural practices amongst suppliers with "Knorr landmark farms" status, a certification rewarding farmers and suppliers able to comply with environmental, economical and social standards beyond the mandatory requirements set out by Unilever in SAC. These farms will serve as role models, offering tangible examples about embracing sustainability in agriculture that should inspire the engagement of Knorr supplier community.

Finally, Knorr communicates its commitment to customers which are more and more interested in traceability "from field to fork" and, hence, want reassurance that the products they buy are ethically sourced, responsibly made and protect the earth's natural resources.

On one hand, sharing the stories of efforts suppliers and growers are undertaking to become sustainable, helps to engage consumers in their understanding of sustainable practices and its benefits. On the other hand, the Knorr Sustainability Partnership symbol on labels specifically conveys the message about the ingredients sustainable traceability.

One of Knorr's tomato suppliers is the Italian Consorzio Interregionale Ortofrutticoli (CIO), a major European association of tomato growers working with 690 farmers, cultivating 9000 hectares of land in the areas of Parma, Vicenza and Cremona. Since the relationship started in the late 1980, CIO has been working closely with Unilever on sustainability and, under the framework of the Knorr Sustainability Partnership, the farms it works with are considered to be 'Landmark Farms', offering best-practice going well beyond the compliance with SAC.

Although CIO had already demonstrated an outstanding degree of environmental performance management, in 2011 it decided to apply for the Knorr Partnership Fund (KPF) in order to reach a new frontier in the sustainable agriculture.

The project required a budget of € 160.000 (founded 50% by Knorr and 50% by CIO), employed to purchase extremely innovative technologies of "precision farming": GPS assisted steering system, satellite aerial photos, prescription maps and machines for distribution at variable rates. The application of those technologies has been allowing enhancements in water distribution, fertilizers distribution and plants protection within CIO farms while reducing the overall impact of agricultural practices on the planet. For instance, the availability of geo-referenced maps combined with "variable rate" management systems make it possible to know in advance which fields require supplementary doses of water or fertilizer and where instead it is appropriate to reduce the dosage, to avoid overlapping areas, areas that are treated twice or not treated at all.

This way of farming enables farmers to grow more productively, increasing quality and yield while cutting down on costs and lowering water and chemical usage.

CIO experience witnesses how important it is to spread sustainability all along the supply chain, beginning from land-farms.

Implementation of such projects requires great investments but it brings critical benefits to all parties involved: farmer, industry and consumer.

Farmers take advantage from sustainable practices developed along with Unilever support, improving quality and yield; Unilever has got the possibility to certify its products as sustainably-sourced; consumers are granted on what they purchase.

Last but not least, we don't have to forget that the biggest beneficiary is our own planet.

Conclusions

In this dissertation we have analyzed an aspect becoming more and more important for multinational corporations: environmental performance management.

Nowadays corporations are under the spotlight, together with all their supply chain, because they are kept accountable for environmental externalities linked with business demand of continuously increasing production; in a world with resources shortage and widespread pollution it is mandatory to re-think our whole way of doing business through environmental performance management, it is not an option anymore.

There is in fact a great awareness in society about corporations negative impact on the planet and the first ones asking for such a change are consumers who keep orienting their purchasing habits toward sustainable products.

At the same time environmental issue has risen the attention of international community and reflected into rules and standards (such as ISO norms) guiding companies toward environmental better-practices and the adoption of tools and techniques to handle their performance.

Obviously "it must pay to be green", companies are going in direction of a more responsible business not only because of ethical concerns but also because it can create a competitive advantage; in the very next future resources and capabilities will be originated from an efficient environment management with higher returns in terms of:

- Costs savings alongside the value chain associated with energy, materials and waste reduction as well as low regulatory costs;
- Improving the overall image or reputation of the company, and hence increase customer loyalty or support sales efforts;
- Facilitating access to new niche markets by differentiating the offer with green products and services.

Only companies who will have achieved a more sustainable business can grow in the long term, resources are limited and only through a better management of the exhisting ones it is possible to thrive economically in the future while preserving our planet. No matter which industry sector you are competing in, natural environment will always determine the surrounding context, threatening the overall performance because there is no trade-off between sustainability and profitable growth: you cannot reach one without the other.

Besides multinational companies are major players in the global economy and, due to their financial strength and political influence, can lead the shift towards sustainable development. One of the corporations believing that business should be "part of the solution" is Unilever which has implemented its strong operational expertise and understanding of consumers lives around the world to improve people and planet wellbeing. Sustainability means to Unilever pursuing simultaneously economic, social and environmental goals through a strategy aimed at creating profit for stakeholders while delivering value to the whole society. The turning point for companies future growth lies indeed in the achievement of those interconnected goals because, as argued by Natural Resource Based View Theory, profitability and competitiveness stem from resources and capabilities allowing better environmental perfomance management and a sustainable economic activity.

In line with that Unilever has been integrating sustainability into business model and culture in order to develop practices and polices that, while reducing environmental footprint, also provide internal efficiency and economic advantages. Firstly, through the Sustainable Living Plan, the company identified those areas in which it has an opportunity to reduce the environmental impact, namely greenhouse gases, water use, waste and packaging and raw materials sourcing. Afterwards, for each of those areas it set out targets and actions in order to address environmental externalities at every stage of the value chain. On one hand by leveraging on technology and innovation, Unilever is working to improve internal manufacturing processess in order to deliver products with high level of performance and sustainability.

On the other hand, it has been focusing its efforts on suppliers and consumers as both play a key role in company sustainability journey.

One of the main challenges for multinational corporations is to drive the environmental perfomance management down a supply chain which is more complex and distributed in a wide number of countries with different economical, political and cultural contexts. Specifically, when business units and processes are located in developing countries with lax regulatory legislations, it results difficult to ensure the compliance against sustuinability standards, likewise to obtain commitment within supplier community.

Certainly, international standards such ISO 14000 which become *de facto* rules, are a mean to guide companies in the implementation of techniques and tools aimed at handling environmental externalities while increasing trasparency about business operations within and outside factory boundaries.

On top of that, Unilever value added is not only demanding suppliers and business partners for an alignment with mandatory international standards, but also setting strategies to boost them to the adoption of sustainable best practices aiming to higher targets than simple legal compliance. In order to encourage suppliers to develop best practices, Unilever supports them with useful tools such as the availability of a digital platform with parameters, informations, suggestions and reports or, even more effectively, with Responsible Sourcing Policy guide lines, both leading them to continuous improvement.

Moreover, Unilever has gone more deeply by displaying suppliers the possibility of taking part to sustainability projects with a mutual benefit: for Unilever monitoring suppliers activity and being granted that products are sustainably-sourced; for suppliers a long term business relationship and better production processes.

For instance, to mainstream sustainable agriculture, The Knorr Sustainability Partnership has been established showing how successful these projects can be thanks to concrete investments by Unilever, investments that could not be carried out by suppliers alone.

Annex 1 Unilever Logo Icons



Spoon

A symbol of nutrition, tasting and cooking.



Spice & flavours

Represents chilli or fresh ingredients.



Fish

Represents food, sea or fresh water.



Sparkle

Clean, healthy and sparkling with energy.



Bird

A symbol of freedom. It suggests a relief from daily chores, and getting more out of life.



Tea

A plant or an extract of a plant, such as tea. Also a symbol of growing and farming.



Lips

Represent beauty, looking good and taste.



Ice cream

A treat, pleasure and enjoyment.



Recycle

Part of our commitment to sustainability.



Particles

A reference to science, bubbles and fizz.



Frozen

The plant is a symbol of freshness, the snowflake represents freezing. A transformational symbol.



Container

Symbolises packaging - a pot of cream associated with personal care.



Heart

A symbol of love, care and health.



Clothes

Represent fresh laundry and looking good.



Wave

Symbolises cleanliness, freshness and vigour.

Liquid

A reference to clean water and purity

Annex 2 Unilever Code of Business Principles

Standard of Conduct

We conduct our operations with honesty, integrity and openness, and with respect for the human rights and interests of our employees. We shall similarly respect the legitimate interests of those with whom we have relationships.

Obeying the Law

Unilever companies and our employees are required to comply with the laws and regulations of the countries in which we operate.

Employees

Unilever is committed to diversity in a working environment where there is mutual trust and respect and where everyone feels responsible for the performance and reputation of our company. We will recruit, employ and promote employees on the sole basis of the qualifications and abilities needed for the work to be performed. We are committed to safe and healthy working conditions for all employees. We will not use any form of forced, compulsory or child labour. We are committed to working with employees to develop and enhance each individual's skills and capabilities. We respect the dignity of the individual and the right of employees to freedom of association. We will maintain good communications with employees through company based information and consultation procedures.

Consumers

Unilever is committed to providing branded products and services which consistently offer value in terms of price and quality, and which are safe for their intended use. Products and services will be accurately and properly labelled, advertised and communicated.

Shareholders

Unilever will conduct its operations in accordance with internationally accepted principles of good corporate governance. We will provide timely, regular and reliable information on our activities, structure, financial situation and performance to all shareholders.

Business Partners

Unilever is committed to establishing mutually beneficial relations with our suppliers, customers and business partners. In our business dealings we expect our business partners to adhere to business principles consistent with our own.

Community Involvement

Unilever strives to be a trusted corporate citizen and, as an integral part of society, to fulfill our responsibilities to the societies and communities in which we operate.

Public Activities

Unilever companies are encouraged to promote and defend their legitimate business interests. Unilever will co-operate with governments and other organizations, both directly and through bodies such as trade associations, in the development of proposed legislation and other regulations which may affect legitimate business interests Unilever neither supports political parties nor contributes to the funds of groups whose activities are calculated to promote party interests

The Environment

Unilever is committed to making continuous improvements in the management of our environmental impact and to the longer-term goal of developing a sustainable business. Unilever will work in partnership with others to promote environmental care, increase understanding of environmental issues and disseminate good practice

Innovation

In our scientific innovation to meet consumer needs we will respect the concerns of our consumers and of society. We will work on the basis of sound science applying rigorous standards of product safety.

Competition

Unilever believes in vigorous yet fair competition and supports the development of appropriate competition laws. Unilever companies and employees will conduct their operations in accordance with the principles of fair competition and all applicable regulations.

Business Integrity

Unilever does not give or receive whether directly or indirectly bribes or other improper advantages for business or financial gain. No employee may offer give or receive any gift or payment which is, or may be construed as being, a bribe. Any demand for, or offer of, a bribe must be rejected immediately and reported to management. Unilever accounting records and supporting documents must accurately describe and reflect the nature of the underlying transactions. No undisclosed or unrecorded account, fund or asset will be established or maintained.

Conflicts of Interests

All Unilever employees are expected to avoid personal activities and financial interests which could conflict with their responsibilities to the company. Unilever employees must not seek gain for themselves or others through misuse of their positions.

Compliance-Monitoring-Reporting

Compliance with these principles is an essential element in our business success. The Unilever Board is responsible for ensuring these principles are communicated to, and understood and observed by, all employees.

Day to day responsibility is delegated to the senior management of the regions and operating companies. They are responsible for implementing these principles, if necessary through more detailed guidance tailored to local needs. Assurance of compliance is given and monitored each year. Compliance with

the Code is subject to review by the Board supported by the Audit Committee of the Board and the Corporate Risk Committee.

Any breaches of the Code must be reported in accordance with the procedures specified by the Joint Secretaries. The Board of Unilever will not criticise management for any loss of business resulting from adherence to these principles and other mandatory policies and instructions. The Board of Unilever expects employees to bring to their attention, or to that of senior management, any breach or suspected breach of these principles. Provision has been made for employees to be able to report in confidence and no employee will suffer as a consequence of doing so.

References

15 Environmental and Business Ethics; available at : https://s3.amazonaws.com/berkley-center/080604MayledEnvironmentalandBusinessEthics.pdf

Alexander MoutChnik, International Summer Academy of Technology Studies- *Corporate Sustainability*; available at http://backup.oikos-international.org/fileadmin/oikos-international/Summer_Academies_old_ones_/edition_2003/Papers/paper_moutchnik.pdf

Andreea-Daniela Gangone, *Ethical Issues in International Business*. Available at: http://www.seap.usv.ro/annals/ojs/index.php/annals/article/viewFile/335/345

Berchicci Luca, King Andrew, *Postcards from the Edge: a Review of the Business and Environmental Literature*, 2007, Erasmus Research Institute Of Management;

Choucri Nazli, The Global Environment and Multinational Corporations, 1991, MIT Technology Review, article retrieved on the website;

Currin Emma, Businesses Going Green: An Analysis of the Factors that Motivate Firms to Adopt Environmentally Friendly Practices, 2011, Coastal Carolina University Press;

Department for Environmental Food and Rural Affairs, *Environmental Key Performance Indicators; Reporting Guidelines for UK Business*, © Queen's Printer and Controller, 2006, this document is also available on the Defra website.

Department of Environmental Affairs and Tourism, *Life Ciycle Assessment, integrated Environmental Management Information Series*, COPYRIGHT © Department of Environmental Affairs and Tourism 2004. This document is available on the DEAT web site: http://www.deat.gov.za

Duncan French, *International Guidelines and Principles*, CONVENTIONS, TREATIES AND OTHER RESPONSES TO GLOBAL ISSUES – Vol. I Encyclopedia of Life Support Systems (EOLSS);

Environmental labels and declarations, *How ISO standards help*, available at: http://www.iso.org/iso/environmental-labelling.pdf

General Terms and Conditions for the Purchase of Products and Services, Version 1 July 2016, retrieved on Unilever Website Supplier Centre page: https://www.unilever.com/about/suppliers-centre/terms-and-conditions/

Gleckman Harris, *Transnational Corporations Strategic Response to* "Sustainable Development", 1995, Green Globe Yearbook of International Cooperation on Environment and Development, Oxford University Press;

Global Impact, Investing Rating System, (GIIRS: Suppliers and Distributors Social Environmental Practices;

Global Impact, Investing Rating System, (GIIRS) Emerging Market Assessment Resource Guide: Calculating Greenhouse Gas Emissions;

Global Impact, Investing Rating System, (GIIRS): Implementing an Environmental Management System

Global Impact, Investing Rating System, (GIIRS): Monitoring & Recording Energy Use;

Global Impact, Investing Rating System, (GIIRS): Product Design and Sustainability;

Global Impact, Investing Rating System, (GIIRS)Assessment Resource Guide: Environmental Audit;

Goran Milovanovic, Nada Barac, Aleksandra Andjelkovic, *Corporate Social Responsability in the Globalization Era*; paper of the series: Economics and Organization Vol. 6, No 2, 2009, pp. 89 – 104; available at http://facta.junis.ni.ac.rs/eao/eao200902/eao200902-01.pdf

Hansen W. Michael, *Cross border environmental management in transnational corporations*, 1999, Report retrieved on the United Nation Conference on Trade and Development (UNCTAD) website;

Hart Stuart L., *A Natural-Resource-Based View of the Firm*, Academy of Management Review, 1995, University of Michigan;

Hart Stuart L., Dowell Glen, *A Natural-Resource-Based View of the Firm: Fifteen Years After*, Journal of Management, 2011, Cornell University;

International Institute for Environment and Development (IIED), Profiles of Tools and Tactics for Environmental Mainstreaming, N. 5, Environmental Management System, , A product of the Environmental Mainstreaming Initiative (www.environmental-mainstreaming.org)

Jingjing Wan, Youchun Tang, *Literature Review of Corporate Environmental Performance Evaluation*; International Journal of Business and Social Science, 2004;

Johanson, J., Vahlne, J.E., *The Internationalization Process of the firm-A model of knowledge development and increasing foreign markets commitments*, 1977, Journal of International Business Studies;

K. Russell Lamotte, *Mechanisms for Global Agreements*, chapter 48 in International Environmental Laws – The pratitioner's Guide to the Laws of the Planet; available at http://www.bdlaw.com/assets/attachments/418.pdf

Kim Kercher, Corporate Social Responsibility – Impact of Globalization and International Business; Corporate Governance eJournal, 2007, Bond University, available at http://epublications.bond.edu.au/cgej

Klossner David, Factors that influnce firm' environmental performance: an examination of large companies, 2014, Weatherhead School of Management-Case Western Reserve University Press;

Making Sustainable Living Common Place, Annual Report And Accounts 2015; pdf available at Unilever Website: https://www.unilever.com/sustainable-living/

Maljers Floris A., *Inside Unilever: The Evolving Transnational Company*, 1992, Harvard Business Review;

Mobilising Collective Action, USLP Summary of Progress 2015, available at Unilever website page: https://www.unilever.com/sustainable-living/

Piotr Mazurkiewicz, *Corporate Environmental Responsibility: Is a common CSR frame work possible?*; paper retrieved on http://documents.worldbank.org/curated/en/577051468339093024/pdf/421830 csrframework01PUBLIC1.pdf

Porter & Van der Linde, *Toward a New Conception of the Environment-Competitiveness Relationship*, 1995, The Journal of Economic Perspectives, American Economic Association;

Responsible Sourcing Policy, pdf version at https://www.unilever.com/sustainable-living/the-sustainable-living-plan/reducing-environmental-impact/sustainable-sourcing/

Robert Paehlke, *Globalization, Interdependence and Sustainability; Faculty of Environmental Studies, York University, Canada;* paper retrieved on https://www.eolss.net/outlinecomponents/Introduction-Sustainable-Development.aspx

Schmidheiny Stephan, *Changing Course: A Global Perspective on Development and the Environment*, 1992, Business Council for Sustainable Development press;

Scott W. Richard, *Institutional Theory: Contributing to a Theoretical Research Program*, 2003, Oxford Press University;

Sustainable Agriculture Code 2010, Unilever Sustainable Agriculture team: Vanessa King, David Pendlington, Dr. Christof Walter, Dr Gail Smith, Unilever © 2010, retrieved on Sustainable Agriculture Portal:

unilever.com/sustainableagriculture

Sustainable Agriculture Code 2015, Unilever Sustainable Agriculture team: David Pendlington, Jan Kees Vis, Sophie Studley, Vanessa King, retrieved on https://www.unilever.com/sustainable-living/the-sustainable-living-plan/reducing-environmental-impact/sustainable-sourcing/

The Sustainable Source, March 2014 Report, pdf available at https://www.unilever.com/sustainable-living/the-sustainable-living-plan/reducing-environmental-impact/

Unilever 2003 Annual Report & Accounts, retrieved on Unilever Website; pdf available at Unilever Website: https://www.unilever.com/investor-relations/annual-report-and-accounts-2015-downloads.html

Unilever Code of Business Principles and Code of Policies, pdf available at: https://www.unilever.com/about/who-we-are/purpose-and-principles/index.html

Unilever Sustainable Living Plan, Progress Report 2013, link page: https://www.unilever.com/Images/slp_unilever-sustainable-living-plan-2013 tcm13-388693 tcm244-409814 en.pdf

Welford Richard, Corporate Environmental Management: Systems and Strategies, 1999, Earthscan Publications;

Wijen Frank, Van Tulder Rob, *Integrating environmental and international strategies in a world of regulatory turbulence*, 2011, California Management Review Publication;

Wong, Yin-king, *Integrating environmental criteria into the supplier selection process*, 2000, University of Hong Kong; pdf version available at https://hub.hku.hk/bitstream/10722/34050/1/FullText.pdf?accept=1

Abstract

In this dissertation we have analyzed an aspect becoming more and more important for multinational corporations (MNCs): environmental performance management.

Multinational corporations have emerged as major actors in our economy and are under the spotlight, together with all their supply chain, because they are kept accountable for environmental externalities linked with business demand of continuously increasing production. In fact, environmental issue has risen the attention of the whole society (investors, business parteners, consumers, governments and NGOs) that is compellingly exerting pressures on companies to implement sustainable practices and to carefully manage their environmental performance.

At the same time, it is also true that, by leveraging on their financial strength and global reach, they can play a catalyst role in driving a shift of business paradigm towards sustainable development. In other words, by choosing to operate according to the environmental responsibility perspective, multinational corporations can reduce or even prevent environmental externalities associated with their economic activity. Certainly, companies are not driven only by ethical interests, but concern for the environment is becoming a key factor to conduct business worldwide. On one hand, because many international soft laws, such as ISO 14000 standards are *de facto rules*, complying with them is an essential requirement to compete on the global market place, particularly in certain regions and sectors. On the other hand, a more responsible business can create a competitive advantage; in the very next future resources and capabilities will be originated from an efficient environment management with higher returns, for instance, in terms of:

- Costs savings alongside the value chain associated with energy,
 materials and waste reduction as well as low regulatory costs;
- Improving the overall image or reputation of the company, and hence increase customer loyalty or support sales efforts;

 Facilitating access to new niche markets by differentiating the offer with green products and services.

In the world we live in, environmental sustainability has become an unavoidable choice and we argue that not necessarily business and environment are linked by a negative relationship but, on the contrary, a better management on the overall corporate performance can be a means to protect planet's resources while potentially assuring long-term economic profits and growth.

Corporate Environmental Responsibility in management literature

Traditionally Corporate Environmental Responsibility (CER) practices and standards have been adopted as legal compliance towards national and international institutions or as an ethical choice linked to Triple Bottom Line framework, which describes the three interconnected variables – economic, social and environmental – needed for a global sustainable development to be included in driving the company's performance.

In the early 90s new streams of research began to consider other factors as drivers of environmental sustainable choices in business, namely the competitive advantage achievement and the role of self-regulation.

On one hand, Natural-Resource-Based View Theory claims that, as natural environment affects the external scenario in which companies operate, strategies to pursue competitive advantage should be rooted in those resources and capabilities that facilitate environmentally sustainable economic activity. The conceptual framework underpinning this theory proposed by Hart in 1995 describes three main interconnected proactive strategies allowing companies to successfully face environmental challenges: pollution prevention, product stewardship and sustainable development. Fifteen years later, Hart himself reviewed its theory and identified two main factors affecting the firm's capacity to gain financial benefits from of environmental proactive strategies

implementation, namely organizational capabilities and managerial expectations to find profitable opportunities in adopting environmentally proactive strategies.

On the other hand, Institutional Theory looks at the pressures that, by spreading a common set of values and norms, influence companies' choice of voluntary constraining their burden on the planet. There are *normative* and *coercive* pressures exerted by governments, non-governments organizations and community groups, who are continually imposing demands on managers. There is a *mimetic* pressure proceeding from the imitation of best practices and codes of conducts earlier adopted by leading companies as a consequence of shared belief system or to fulfill customer requirements.

The trend of gradually broadening corporate strategy in order to include principles, systems and practices able to face environmental challenges, has eventually led to consider the environmental performance as a new area of business to be managed. Therefore, many stream of research started analysing companies' response to environmental issues and created conceptual categories according to their attempts and efforts to increase their environmental responsibility. The most known one is the ROAST scale, classifying companies approach toward environment in an ascending order:

- o *Resistance*: unresponsiveness to environmental initiatives;
- o *Observe & Comply*: observance and compliance are forced by legislation but actions reflect an unwilling attitude;
- o *Accommodate*: earlier indications of voluntary pro-environment behaviors that go beyond basic law compliance;
- Seize & Preempt: company agenda takes into account the environmental performance management;
- o *Transcendent*: organization's values, attitudes, culture and strategy exhibit a total support for the environment;

As stated before, one of the advantage companies gain by managing their environmental performance, stems from an enhancement in the brand image of the company itself. For that reason, firms with poor environmental performance engage in positive communication to evoke natural environment roots in products or practices that are actually harmful for consumers and planet by spending more money or time on advertising about being "green", rather than perform "green". This is a possible drawback, known as *greenwashing* practice.

Environmental Management in multinational corporations

At an international level, concerns about environmental protection and sustainability are exacerbated just because MNCs by necessity are more likely to engage in a wider range of hazardous and pollution activities, difficult to be controlled within a management structure and supply chain geographically disaggregated. Companies operating in multiple countries face different and often changing environmental legislation and, at the same time, binding regulatory regimes have predominantly remained the realm of national governments as, although international environmental agreements and standards exist, they are compulsory only for those countries that voluntary ratify them.

Specifically, the degree of stringency and implementation can be considered a key aspect; certain countries issue stringent regulation reflecting the political and cultural desire to protect the natural environment by clearly guiding and binding corporate behaviors. Others, usually the developing ones, show very lax environmental laws either because they do not have the apparatus to implement them or because it is seen as a strategy to attract foreign direct investments. In fact, lax regulatory regimes, though unpredictable and uncertain, are interesting destinations for international business and some MNCs are blame of adopting double environmental standards, low within developing countries and high within the most developed ones, in order to take advantage of less bound environmental rules. The main risk is that such fewer restrictions offer "pollution havens" for dirty companies that will relocate the production of their pollution-intensive goods into developing countries in order

to exploit the location advantage of lax regulation and low environment monitoring. On the other side, it has also been argued that, locally complying with different standards and diversifying the environmental performance across countries may not be possible or may result in a costlier strategy. There are two main reasons: firstly, as MNCs mostly rely on geographically disaggregated value chain, they must ensure that all the stages abide by similar standards and practices in order to eventually offer reliable products, above all as far as concern standardized products; then, changing processes and procedures does not allow the exploitation of economies of scales.

In fact, one of the main challenges for multinational corporations is to drive the environmental perfomance management down a supply chain global in scale as it usually involves contractors and subcontractors located worldwide that are linked by information, capital and material flows. In line with the value of the product comes the environmental and social burden incurred during different stages of production. Therefore, corporate social and environmental responsibility, although it is a broad issue encompassing the whole company's treatment of human rights and environment, comes to play a critical role when dealing with supply chain and implied multinational companies' operations being under inspection. They are held responsible not only for aspects such as quality and delivery dates, but also for working conditions and environmental impacts of all the suppliers and business partners – even without exercising ownership – they work with.

In order to integrate the environmental perspective into the supply chain, MNCs can rely on different channels and mechanisms. On one hand, accurately selecting partners and suppliers by auditing and assessing them on environmental performance metrics and standards, set both at industry and international levels – and eventually reporting strategic data and relevant measures. On the other hand, positively broadcast the environmental responsibility framework through incentives – such as long term contracts – technical support and formal training for key workers to accomplish the required performance as well as introducing environmental friendly initiatives and integrating environmental principles into corporate code of conducts.

It has been already discussed that environmental management, as a discipline within the business management, refers to the objectives, standards, procedures and practices that a firm sets up and integrates into the overall corporate strategy to tackle environmental concerns; as firms internationalize, they should decide how to manage environmental performance cross national borders. Some scholars, in the late 1990s, proposed a typology of cross border environmental management strategies adopted by corporations based on either local adaptation or global standardization logics:

- Decentralized Management: each affiliate autonomously manages environmental performance, within local boundaries, by establishing internal techniques and standards suitable for the specific context and, hence, able to address local concerns and issues.
- o *International Compliance Strategy:* local managers are free to independently set specific policies and programmes but are required to comply with the environmental regulative framework. To ensure that, procedures for enforcement, monitoring and auditing are homogeneously spread downward from the headquarters to all the subsidiaries
- Centralized Management: ruling from the headquarters all the policies, standards procedures and practices to be hierarchically applied within the whole organization to handle the environmental performance, regardless of local requirements and specificities.
- O Globally Integrated Management: horizontally integrating environmental policies, standards and practices within the corporate network in accordance and with the contribution of any companies' affiliates in order to be at the cutting-edge of global environmental management worldwide.

Environmental Performance Management Tools and Techniques

Companies have a wide range of possible alternatives to manage their environmental performance and, in general, to handle their impact on the planet..

Certainly, as a first step, they should embed aims and intentions underpinning the company's commitment towards environment in to the overall corporate culture through the environmental policy, preparing the field for further environmental management activities.

We analyzed the following tools:

- Environmental Management Systems
- Environmental Audit
- Life Cycle Assessment
- Ecolabelling
- Environmental performance Evaluation and Reporting
- Best practices at work place & Green Building Practices

Those tools can be intended both as an independent technique of environmental performance management and as an element of the Environmental Management System (which in turns is considered a type of environmental management technique). EMS can be defined as a structured framework for managing organizations' significant environmental aspects by providing a set of practices and processes through which it can engage with employees, customers, subcontractors and other stakeholders to identify environmental goals and try to achieve them. In other words, there are companies that choose to coordinate many tools in a unique and structured framework enabling them to manage their environmental affairs in a planned and systematic way; others that prefer to rely on some techniques separately – such as by embedding a policy statement into the corporate code of conduct, or setting up an auditing scheme to check whether a business unit complies with environmental standards.

In the implementation of environmental management tools, regardless the strategy corporations undertake, they can follow guidelines formally

established by international agencies as well as being certified against globally recognized standards. National and international environmental performance certification schemes and environmental management guidelines emerged in the early 1990 and have been since then standardized and structured to help companies undertake environmentally responsible conducts while doing business; the ISO 14000 has risen to be the dominant voluntary code of industry environmental conduct at an international level. The ISO 14001 sets out a blueprint for the development of Environmental Management Systems and it is the only ISO 14000 standard against which a company can be certified by a third party.

The other standards cover a wider range of environmental issues, and basically represent an umbrella of guidelines, many to help companies achieving the ISO 14001 certification, but also implemented as stand alone tools to manage the environmental performance. It is finally important to stress that the commitment to comply with such standards, though necessary to compete on the market, is on a voluntary basis; it is also voluntary the certification a company might request to independent agencies for having pursued prearranged environmental performance objectives.

Unilever: a longstanding commitment to sustainability

The focus on an international giant of consumers' products with a sustainable DNA allows us to show that social and environmental responsible business is ambitious but possible and profitable. In fact, by looking at the corporate model, choices and behaviors of a group which products are used by 2 billion consumers worldwide in their everyday life, we can acknowledge the extremely important role that multinational companies might exert in positively impact the planet and the people living on it, eventually leading the shift towards sustainable development.

In a world where climate change, resources shortages and the gap between poor and rich require a shift towards a sustainable and equitable economic order, business must be part of the solution. In line with that, Unilever ambitiously embraces a vision for its future growth: to double the business, whilst reducing the environmental footprint and increasing positive social impact; therefore, sustainability is not an aspect of business – like carry on practices of social responsibility or resources preservation – but is the common ground linking together economic growth, society and environment. For such reasons, the business strategy for sustainability corresponds to the overall corporate four pillars – brands and innovation; marketplace, continuous improvement; and people – that frame Unilever business model. In fact, building strong brands, continuously developing innovative solutions alongside the global value chain as well as investing in people, are the levers to pursue the sustainable living goal, at the core of the model. At the same time, integrating sustainability into each of the levers, is how Unilever derives profit and delivers value for society. On one hand sustainability contributes to business success in number of ways. It provides innovation and market opportunities to rethink products design and brand characteristics in order to meet consumers changing needs. Strengthening the connections between consumers and the products they buy translates into sales growth and brand awareness. Furthermore, the adoption of sustainable practices in business operations, materials sourcing and products manufacturing create internal efficiencies and cost saving advantages. On the other hand, Unilever exerts a catalyst role of global issues such as deforestation, water scarcity and under-nutrition that challenge the society as a whole. The company has been promoting programmes and initiatives in partnership with governments, NGOs and suppliers to lead a systemic change in business practices that will be sustainable, but also profitable, in the long term. For instance, to mainstream sustainable agriculture, The Knorr Sustainability Partnership has been established showing how successful these projects can be thanks to concrete investments by Unilever, investments that could not be carried out by suppliers alone.

Eventually Unilever case seems to be the proof that economic growth can be performed by acquiring sustainability as a key factor of company identity and strategy.