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When Money Grows on Trees

The case of beyond-compliance companies sourcing from the Amazon Rainforest

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Max

Abstract

The Amazon Rainforest is in grave danger of disappearing for good, due to a number of harmful economic activities, including land conversion for cattle ranching and monoculture, as well as unsustainable and illegal timber production. It has been shown, however, that the private sector has a crucial role in redressing socio-economic problems, causing deforestation and degradation. To illustrate this claim in the given context, three (3) reputable, sustainably-inclined companies, namely Natura, Precious Woods and Veja, are analysed, based on applicable strategic and value driver objectives, and how these translate into triple-bottom-line efforts and achievements thereof. Secondly, the paper goes on to explore contextual drivers of, and barriers to the expansion of beyond-compliance/sustainable businesses in the Amazon. In order to achieve this end, a number of on-site interviews, in conjunction with a subsequent survey, and a modified version of the Performance Framework, first applied in the context of the Portuguese manufacturing industry, were used.

The study found that the surveyed and interviewed businesses, showcased triple-bottom-line business models that take up a number of root causes of deforestation, ranging from below-par education to the absence of value-adding activities regionally. Moreover, scale, market positioning, financial stature, political influence and desirability to collaborate with other stakeholders on the part of the companies, were found to be decisive factors in maximising positive impacts locally. Another notable finding was that examined companies were profitable. However, relative to illegally sourced products, sustainable products from the Amazon are currently still less competitive due to the higher cost structure associated with full legal compliance, certification and above-average efforts.

Keywords: Amazon Rainforest, sustainable business, beyond-compliance companies, Performance Framework, Balanced Scorecard

Executive Summary

Today the Amazon Rainforest's biosphere is not only recognized for its inherent beauty and breadth of biodiversity, but also for its resources and more recently, the supply of ecosystem services, including biodiversity maintenance, rainfall generation and carbon sequestration (*How to Save the Amazon Rainforest* n.d.). Despite the supply of these invaluable ecosystem goods and services, the Amazon is disappearing at an alarming rate, releasing 50 % more carbon than the entire transport sector worldwide. The IPCC has concluded that the global community would have to decrease greenhouse gas emissions by 17 GT by 2020 to meet climate goals. In meeting this challenge, it has been determined that the forestry sector alone has the ability to contribute 7.8GT by 2030 (Viana, 2009, p. 9). The issue however is that conservation of the Amazon Rainforest is oftentimes at odds with economic aspirations, exemplified by activities like cattle ranching, land speculation and the illegal timber trade. In order to effectively redress deforestation in the Amazon, public and private actors alike agree that natural capital, consisting of ecosystem goods and services, need to be given an adequate monetary value. Although a necessary part of the conservation strategy, the mechanism *payment for ecosystem services* (PES) has two crucial flaws: it neither accounts for human capital in the Amazon, nor does it have potential to add value through processing of goods. Against the backdrop of pronounced socio-economic issues in the Legal Amazon, relative to the rest of Brazil, the private sector has an imperative role to play in addressing economic opportunism, caused by unfavourable peripheral circumstances.

With the principal fault line between a standing and a deforested Amazon Rainforest being financial, integrated business models, accounting for environmental and sustainability performance at large, hold great potential to bridge the gap between profitability and conservation. A number of companies sourcing timber and non-timber products from the Amazon are already operationalizing integration as a means to close this chasm. In order to accommodate the multitude of interests imparted by stakeholders in the region and an environment that exhibits an array of contextual complexities, the adoption of two corporate philosophies are necessary, first the stakeholder view (Clarkson 1995; Sachs, Post, & Preston, 2002) and second, the notion of corporate sustainability (Schaltegger & Burritt, 2005, p. 189). In recent years, deforestation has experienced a sharp downward trend, mostly attributable to the Federal Government's Prevention and Control Plan of Deforestation in the Legal Amazon (PPCDAM). Between 2011 and 2014, however, financial support through this programme dropped by 72%. Not much attention has been paid to individual companies' roles in filling in this gap. Against this backdrop, this paper will examine how designated beyond-compliance companies, active in the Amazon, are implementing business strategies, while illustrating concrete socio-environmental initiatives and accomplishments thereof in providing profitability and redressing some of the root causes of deforestation. This study will be undertaken by reviewing three companies active in the Legal Amazon, namely, Natura, a Brazilian cosmetics company; Precious Woods, a Swiss timber company and Veja/Vert a French shoe company sourcing solely from Brazil. The research questions are as follows:

1. a) What strategic environmental and social initiatives and measurements are sustainably-inclined companies, sourcing from the Amazon Rainforest operationalizing, to achieve triple-bottom-line value in the given context and how can their actions be classified?

   b) What achievements can be attributed to these initiatives in fulfilling the triple-bottom-line criteria (economic, social, environmental)?

2. a) What driving forces are there for sustainably-inclined business operations and are there identifiable patterns between different companies?

b) What factors inhibit the expansion of sustainable business operations in the Amazon and how do they affect beyond-compliance businesses?

Methodology

In order to examine these companies and answer the stated research questions, the author will use an adaptation of the Performance Framework by Dias-Sardinha & Reijnder (2005), featuring a themed balanced scorecard. The framework has previously been employed in the context of the Portuguese manufacturing industry to assess socio-environmental initiatives of companies with specified performance statuses. The framework has also been supplemented with a variant of the Value Driver Model (2013), which has been used previously to gauge the connection between environmental, social and governance (ESG) strategies and profitability. In the first instance, the author used the Performance Framework to connect well-established strategic and value driver objectives, like *pollution control*, *eco-efficiency* and *growth from sustainability advantaged products* with the contextual interpretation thereof. In the second instance, it was used to understand how examined companies responded to these objectives in reality, illustrating initiatives, measurements and achievements thereof by means of a themed balanced scorecard (BSC). Depending on the company context, 5 perspectives were used within the BSC, namely the *learning*, *process, stakeholders, triple-bottom-line* and/or *financial perspective*. This procedure was used to answer *research question 1*.

Research question 2 was answered by applying the second component of the adapted Performance Framework. It identified suitable drivers for companies to conduct beyond-compliance business operations in the Amazon and at the same time ascertain the challenges that the researched companies are subjected to. The former featured criteria like *pressure from customers* and *our business has the ability to raise living standards in the Amazon.* The latter included *not enough investment money or interest in investing in the Amazon* and *government policies are impairing the spread of sustainable or triple-bottom-line businesses in the Amazon.*

The procedure for both research questions is explained in the figure below.

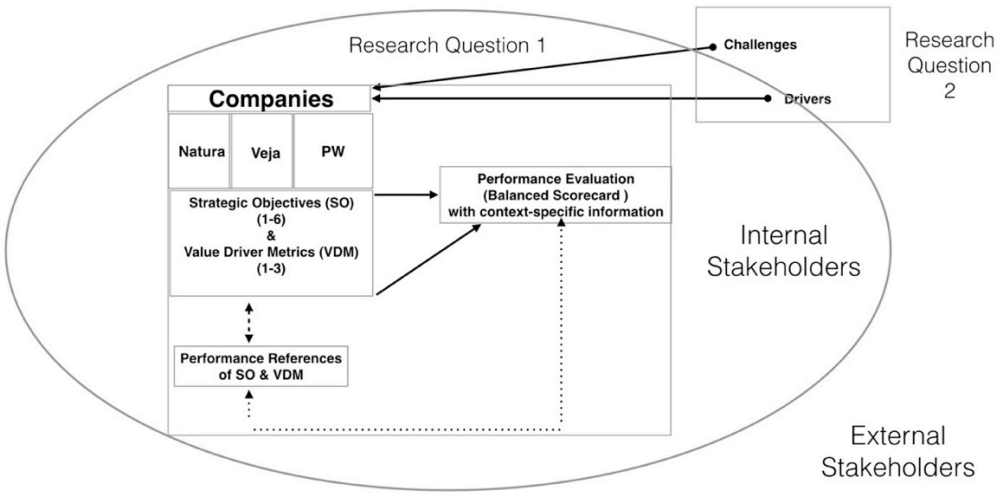

Figure *1*: *Evolutionary Performance Framework for assessing sustainability performance strategies of companies*

Main findings

Pertaining to *research question 1,* it was found that *benefit sharing was significant amongst stated companies* in reviewing their strategic objectives and their conjunctive initiatives, measurements and achievements thereof. Depending on contextual aspects, like company size, operational complexity and amount of biodiversity inputs at on-site operations, the breadth of socio-

economic benefits accruing to internal and external stakeholders, e.g. rubber tappers, local farmers and communities, varied. In doing so, companies were able to address root causes of deforestation and existing barriers, while benefits to the overall business were also discernible.

Natura, a Brazilian multinational cosmetics manufacturer, reliant on many Amazon inputs, and an array of sub brands like the Amazon-inspired Ekos line, was able to play a role in establishing broad-spectrum education, contribute to institutional development and reinforcement, job creation and R&D. A noteworthy initiative that was found to be congruent with an array of objectives, like *pollution prevention*, *eco-efficiency* and *performance from sustainability-driven productivity initiatives,* was the company's construction of a modern soap factory in the region. Benefits included, cost savings, greater use of biodiversity ingredients, job creation and mitigation of environmental impacts from transportation. The company's actions and strategies, aligning with framework objectives were also found to be guided by the company's Amazônia Program, spanning three pillars: *Science Technology and Innovation*, *Sustainable Production Chains* and *Institutional Reinforcement*.

Pertaining to *Precious Woods*, it was found that—although a little less complex than Natura's operations—the company was able to contribute a number of socio-environmental benefits, largely due to the FSC certification, guiding the company's socio-environmental strategy. The certification by default posits benefit sharing with surrounding stakeholders and a higher level of skill to meet principles of sustainable forestry. In order to create an employable workforce, PW created vocational education and provided skill training. Also, in light of the company's competitive disadvantage, relative to illegal incumbents, PW diversified its revenue stream, in assuming co-ownership of a biomass plant, bringing clean electricity to a neighbouring city and generating carbon certificates along the way. This initiative for instance can be seen as, in line with *eco-efficiency*, *pollution control* and *growth from sustainability-advantaged product*s.

Veja, a Parisian manufacturer of shoes, exclusively made in Brazil, was found to disseminate less socio-economic and environmental benefits than the other two examined companies, mainly because of less breadth of its operations in the Amazon. However, through its *zero-stock, zero-advertisement* policy at the corporate level and innovations like smoked liquid sheets (FDL), the company was able to pay rubber tappers higher wages, while adding value to local residents, beyond the company's operations. These actions were found to be in line with *eco-efficiency* and *eco-innovation* (research on Veja was not complete due to a missing questionnaire).

Another significant finding, answering *research questions 2* and 1 partially, was that many of the challenges facing beyond-compliance companies and the Amazon region at large, as well as corporate actions toward benefit sharing were characterized by collaborations with state institutions, ministries and NGOs. Similar to the previous finding, depth of and number of collaborations were found to be dependent on aspects like complexity and diversity of on-site operations. Generally, collaborations were found to either contribute to operational efficiency, usually resulting in socio-environmental benefits, or sometimes born out of necessity to meet legally binding requirements. However, in response to *research question 2* (barriers and drivers), it was apparent that all companies recognized that the continuity, expansion of sustainable business in the Amazon, and safeguarding of "the Amazon brand" rested on the ability to address socio-economic and environmental issues to the largest extent possible. Some of the significant drivers of business sustainability in the Amazon that were agreed on in unison were: *the private sector has the power to put an end to deforestation in the Amazon*; *our business has the ability to raise living standards in the Amazon*; *improvement of resource efficiency in the Amazon*. In regards to challenges, respondents agreed that *inadequate job opportunities for locals*, *insufficient value-adding activities for companies* and *insufficient expertise* were key challenges to establishing sustainable business operations in the Amazon.

More generally, it was also found that the initiatives and objectives of examined companies were by and large in accordance with the three macro-objectives for sustainable development of the Amazon Rainforest, i.e. *multiple uses of the forest, enhancing the local value chain* and *social inclusion*. In the context of other strategies to redress deforestation, the study concludes that public policy and mechanisms like REDD+ and the Amazon Fund are essential in a supportive function. However, given the problem of economic opportunism, the private sector and integrated business strategies will have to play a leading role in addressing fundamental socio-economic challenges, leading to the clearance of the Amazon Rainforest in the first place.

Recommendations

In light of a multifaceted, economic context like the Amazon, that is indicative of problems like rampant deforestation and concomitant issues like land feuds, corruption and loss of biodiversity, the following suggestions are being recommended. Firstly, incumbent and future businesses wanting to use biodiversity goods and services from this region would be well advised to adopt integrated business strategies that connect strategic objectives with contextual actions, enabling them to avert potential risks and unlock new business opportunities. Although the Amazon is a challenging environment to set up a venture, predicated on a forest economy, corporate actions that promote *benefit sharing* and *collaboration* with public and other private- sector actors can go a long way in bringing down contextual roadblocks, e.g. bureaucratic red tape, below-par education and illegal activity. Also, collaborations have great potential to reduce the price tag for necessary infrastructure development required to enable greater benefit sharing and increase the extent of added value locally.

Secondly, the amendment of laws on the part of policy makers in favour of incumbent and future businesses, using biodiversity inputs sustainably and sourcing local labour from the Amazon, should assume top priority. This applies particularly in the sphere of red tape, which hits beyond-compliance businesses hard, with oftentimes tightly calculated budgets for local development projects. Similarly, cooperation with private-sector actors could help streamline processes like obtaining permits. At the same time, collaboration can also assist in reducing the cost of the federal and state governments' public mandate, to construct schools, research facilities and to provide an adequate curriculum tailored to meet local realities.

Finally, with consumers becoming more conscientious of what they buy and the perception that quality is not only a matter of good workmanship, but also of environmentally and civically sound products, goods from the Amazon have great potential to becoming a market differential. Unlike anonymous products, that are made with oftentimes cheap labour and generic materials, the "Amazon brand" has great potential to yield novel products that not only exhibit a high level of uniqueness and style, but can also contribute to creating a bulwark against destructive economic activity in the Amazon. Thus, the Amazon is an example of an area that still holds an immense capacity to innovate and also embody the case for a forest economy based on a standing forest.

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Abbreviations

BNDES – O banco nacional do desenvolvimento (Brazilian Development Bank)

BSC - Balanced Scorecard

CAR - Cadastro Ambiental Rural (Rural Environmental Registry)

CDM - Clean Development Mechanism

CDSA - Companhia de Desenvolvimento de Serviços Ambientais de Acre (Environmental Services Development Companies of Acre)

CFRs - Casas Familiares Rurais do Pará

CRA - Cota de Reserva Ambiental (Environmental Reserve Quota)

CSR - Corporate Social Responsibility

DJSI - Dow Jones Sustainability Index

DOC - Documento de Origem Florestal *(Document of Forest Origin)*

EMS - Environmental Management System

ESG - Environmental, Social and Governance Strategies

ESP&L - Environmental and Social Profit and Loss Accounting

FC - Forest Code

FDL - Folha Defumada Liquida (Smoked Liquid Sheets)

GHG-Greenhouse Gas Emissions

GIP - Gestão de Interesses Públicos

GRI – General Reporting Initiative

HDI – Human Development Index

IBAMA-Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (Brazilian Institute of Environment and Renewable Natural Resources)

IPCC-International Panel on Climate Change

LC - Life Cycle

LCA - Life Cycle Approach

LR - Legal Reserve

NINA - Núcleo de Inovação Natura Amazônia (Natura Amazon Innovation Center)

PCR - Pós-consumo de material reciclado (post-consumer recycled material)

PES - Payment for Ecosystem Services

PPCDAM - Prevention and Control Plan of Deforestation in the Legal Amazon

PW - Precious Woods

PWA - Precious Woods Amazon

REDD+ – Reducing Emissions from Deforestation and Degradation

RESEX - Reserva Extravista (Extractive Reserve)

RPR - Riparian Preservation Area

SBSC - Sustainability Balanced Scorecard

SD - Sustainable Development

SD - SRM-Sustainable Development Stakeholder Relation Management

SDI – Sustainable Development Indicators

SMS - Social Management System

SOU - Natura's conscious consumption initiative (literal meaning not available)

SRM - Stakeholder Relation Management

S,T&I – Science, Technology and Innovation

TEEB-The Economics of Ecosystems and Biodiversity

Exchange rates

For the sake of convenience and comparability, the author has provided a currency conversion of the two main currencies used in this thesis to euros. Currency data were sourced from XE.com on Thursday September 10, 2015.

1 euro (EUR):

= 4.35 Brazilian Real (BRL)
= 1.13 US Dollar (USD)

1 Introduction

The Amazon Rainforest is a biosphere that is not only recognized for its inherent beauty and breath of biodiversity, but also for its resources and more recently, the invaluable environmental services it renders, including biodiversity maintenance, rainfall generation, carbon sequestration, and soil stabilization (*How to Save the Amazon Rainforest* n.d.). In spite of the numerous benefits that tropical rainforests like the Amazon have, particularly their key role in mitigating climate change, tropical forests are disappearing at a frightening rate, generating 50 percent more greenhouse gases than the entire international transportation sector (Edenhofer et al., 2014). The IPCC estimated that in order to meet climate goals, developed countries would have to reduce their emissions by 17 Gt annually by 2020. By 2030, the forestry sector alone could constitute 7.8 Gt of required reduction of emissions (Viana 2009, p. 9). This begs the question of why deforestation is continuing? According to Virgílio Viana, director general of the Sustainable Amazon Foundation, deforestation is not happening due to "stupidity or ignorance, or out of insanity, nor irrationality" (*The Amazon Under Debate: Opportunities, Challenges and Solutions* 2010). Rather it has been concluded that the root of the problem is financial (Brouwer, 2007).

1.1 A necessity and opportunity to bridge the gap between profitability and conservation of the Amazon Rainforest - a business approach

The Amazon Rainforest is currently being examined for its important role in combating one of mankind's greatest threats, namely climate change. Ample proposals are on the table to put financial value on ecosystem services, with *Payment for Ecosystem Services* (PES) having received the most attention in recent years. PES denotes the terms of a voluntary transaction, involving an established ecosystem-service or land use that is bought by at least one buyer from at least one provider, who subsequently has the jurisdiction over service provisions (Wunder, 2005). Payment for ecosystem services is one way to extrapolate the capitalist paradigm to nature and give it competitive profitability relative to destructive economic activity. Less attention has been given to the second element of natural capital however, namely ecosystem goods, which are clearly identified in Robert Constanza's definition, positing that "natural capital is the extension of the economic notion of capital (manufactured means of production) to environmental goods and services…natural capital is thus the stock of natural ecosystems that yields the flow of valuable ecosystem goods or services into the future". (*Natural Capital* n.d.). The problem inherent to payment for ecosystem services, rather than ecosystem goods, is the fact that it neither accounts for the human capital available in the Amazon, nor is there potential to add value through further processing, a rampant problem that is pronounced in the Amazon. Although there is economic activity in the Amazon derived from commodities, Brazil's exports are suggesting that the majority of economic activity has not been generated by sustainable means, but that high levels of deforestation-related emissions and high proportions of exported production are positively correlated (Cuypers et al., 2013). It has been estimated that 90 percent of the Amazon's deforestation can be ascribed to commercial agriculture (Lawson et al., 2014, p. 35). This alludes to the sobering reality that economic

activity and conservation in the Amazon are disjointed. Current proposals to tackle this problem are largely premised on institutional approaches, taking a macro perspective. Although institutional approaches are indispensable in paving the way for a green economy, individual businesses need to see financial value in conservation, making an integrated business strategy the link that closes the gap between profitability and conservation. Only then can the Amazon's tremendous potential be unleashed to become an incubator for a green economy that is based on a symbiosis of nature and business.

1.1.1 Implicit drivers and implications of deforestation in the Amazon

Deforestation[1] in Brazil's Amazon accounted for one quarter of forests lost worldwide between 1990 and 2010 and a third of all tropical forests lost worldwide between 2000 and 2012 (Food & Nations, 2010; Lawson et al., 2014). Initial deforestation in the Legal Amazon[2] can be attributed to infrastructure developments, such as roads along the "Arc of deforestation", including Pará, Mato Grosso, and Rondônia, which has led to enhanced accessibility by humans and consequential land conversions and settlements (Brazil, 2002). In recent history, an important driver for deforestation has been land conversion, largely due to soy production and cattle ranching. Subsequently, fluxes in land use have made it difficult to determine the exact magnitude of deforestation. Although the exact proportion of deforestation caused by specified activities exhibits varying degrees of conclusiveness, satellite imagery by Brazil's National Institute for Space Research (INPE) suggests that 62.2%[3] of deforestation that occurred before 2008 was connected to the creation of cattle pastures, 4.9 % to crops and 9.7%[4] are unclassified, but were likely used for grazing pastures and crops (*Levantamento De Informações De Uso E Cobertura Da Terra Na Amazônia* 2011/2011). The practice of deforestation for the creation of soy plantations in the Amazon region has largely been discontinued since 2006, at least legally, due to a voluntary moratorium of the soy producers, but deforestation due to soy still continues in other biomes in Brazil (Walker, Patel, & Kalif, 2013, p. 448).

Ownership rights

The root of the problem that has given rise to this regime of large-scale deforestation can in part be explained by lacking institutional capabilities and loopholes in the domain of legal governance that has enabled organized land grabbers and squatters to clear large swathes of rain forest with impunity. The first scenario is the situation, where deforestation is in compliance with reserve limits and thus, does not appear in illegal deforestation statistics, in spite of the fact that the land was appropriated illegally through corruption or forging of land titles. These types of illegalities are symptomatic of the ineffective, bureaucratic and complex mechanisms, let alone high transaction costs that landowners of legal land are subjected to, compounded by lacking capabilities on the part of authorities to respond to demands of holders (Barreto & da Silva, 2013).

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[1] Refer to appendix 7.8 for photos evidencing deforestation in the State of Acre.

[2] This thesis will be largely premised on the definition of the *Legal Amazon,* denoting the part of the Amazon, which is on Brazilian territory and was awarded this status in 1953 by the Federal Government of Brazil, with the intention of promoting economic development. The expanse covers an area of 5.2 million sq. km, amounting to 61% of the Brazilian territory. The term will be used interchangeably with *Amazon*, but only refers to the fraction of the Amazon on Brazilian territory, except in circumstances where data are only available for the Amazon biome at large.

[3] 62.2% is determined by adding up the percentages of "clean pastures", "pastures with bare shrubs", "pastures with bare soils" and "regenerating pastures".

[4] 9.7% was derived from taking applicable percentages of "occupied mosaic land" and "areas not observed".

Thus, lacking capabilities to enforce property rights have allowed illegal deforestation to flourish. In order to address these irregularities that have not only caused deforestation, violent feuds between landowners and withdrawals of investments due to land title uncertainties, local governments have responded by regularization, albeit with very little success. These transgressions can be categorized as weaknesses and lack of oversight in the legal system on the part of the state government. However, there are also wanton cases, where authorities in charge of administering the ownership rights to land, turn a blind eye through the practice of bribery. Upon comparing land registry records, it is not infrequent that multiple owners are registered on the same parcel of land. This practice, in particular, was driven by low interest rates on loans for landowners in the past (personal communication, Christian Marzari, July 14, 2015). In fact, it was maintained that in 2009 less than 4% of land carried legal ownership titles. Illegalities in relation to land titles have been highly instrumental in engineering a scenario in which cattle ranching has become a highly profitable activity because it does not include the cost of legal land appropriation (as cited in Lawson et al., 2014).

Legal reserves

It is estimated that between 68 and 90% of legal breaches occurred on land that originally carried a legal land designation, but violated all other obligations attached to the land (Lawson et al., 2014). This can be explained by the fact that land was acquired legitimately and therefore the legal obligations associated with land parcels were not given further attention. This constitutes the second category implicated in illegal deforestation. Reserve limits (RL) designate the legal minimum that the land owners need to set aside for conservation. Today the legal minimum in the Amazon is 80%; in previous years it has been as low as 50% (as cited in Lawson et al., 2014). However, the reality on the ground is that ecological zoning, leading to the creation of legal reserves, is frequently at odds with economic aspirations because up until now, very few incentives have been given to set aside land. This contravention of the Forest Code is particularly difficult to spot and enforce, as it frequently occurs on legally owned land or land that was retrospectively regularized.

Speculative deforestation

This signifies a tactic whereby government-owned land is illegally seized and cleared of trees to communicate purported land ownership with the anticipation that the property will increase in value. Alternatively, illegal land occupants wait until infrastructure becomes available in order to increase productivity on the parcel of land (Barreto, Pinto, Brito, & Hayashi, 2008). It is assumed that this practice is responsible for approximately 10 million ha of overgrown pastures in the Amazon. What aggravates this situation further is that all three branches of government, namely the Judiciary, Legislature and Executive tolerate this practice and are often complicit in making land available through regularization. One manifestation of the enactment of regularization entails donating or selling land below market value, increasing profits of speculators exponentially. Meanwhile this practice has gained momentum due to its wide appeal for politicians and land occupants, in that both parties have taken legal action to diminish restrictions placed on protected areas, frequently even challenging indigenous land titles (Barreto & da Silva, 2013). Although the Brazilian government has been successful in some areas in redressing illegal deforestation in recent years, many efforts have been futile due to detrimental amendments to Brazil's Forest Code (FC), a de facto environmental law that governs land use and management on private properties to enforce penalties on illegitimate land appropriation and conversion. It was signed into action after 2012. This resulted in around half the cases of illegal forest conversions going unpunished, giving many land grabbers and squatters amnesty under the current legal regime. In light of the fact that the highest rainforest losses in the Amazon were recorded during the period of 1996 and 2008, this constitutes an act of gross negligence (Lawson et al., 2014).

1.1.2 Illegal deforestation and commodities - economic opportunism - the principal variable between a standing and a cut forest

Recent export quotas and strategic parcelling of land, accompanied by deforestation are indicative of the economic propensity in the Amazon Rainforest, scilicet deforestation is coupled with economically inspired opportunism. The large numbers of Brazilian commodities and the type of commodity sourced from the Amazon linked to illegal activities insinuate two things: first, that the breadth of profitable and sustainable activities linked to business operations in the Amazon is limited; second, that there are very few activities that add adequate value to products from the Amazon. The following numbers illustrate the latter and the former assumptions: 90 % of timber originating from the Amazon has been found to be sourced illegally (Stickler, Nepstad, Azevedo, & McGrath, 2013; Viana 2002); the total for illegal soy production occurring in the Amazon has been approximated at 49%[5] in the period 1996 to 2005; for illegal deforestation attributed to beef and bovine leather the percentage lies at 73%[6] for the same period (Lawson et al., 2014). While the aforementioned activities are associated with the preponderance of deforestation cases, gold is another commodity that has been linked to rampant devastation in the Amazon biome, not only related to deforestation but also catastrophic waterborne pollution caused by mercury and quicksilver, used to separate gold from soil.

1.1.3 The *status quo* of Brazil's anti-deforestation measures

The amended Forest Code

Although the Brazilian government has been successful in some areas in redressing illegal deforestation in recent years, many efforts have been futile due to adverse amendments to Brazil's Forest Code (FC), a legal framework that governs land use and management on private properties. The FC has been replaced by the Protection of Native Vegetation - Law No. 12.651 / 2012. According to Soares-Filho et al., an amendment to the Forest Code in 2012 prescribes the reduction of Brazil's "environmental debt" by 58% (2014). In other words, owners of legal reserves (LR) and Riparian Preservation Areas (RPAs) that were previously obligated to restore land at their own expense before 2008 were partially omitted from honouring this obligation within the new rules[7]. One major implication of this amendment is that 90% of Brazilian rural properties are eligible for these omissions. In light of the fact that the highest rainforest losses in the Amazon were recorded during the period between 1996 and 2008, this constitutes a strong weakness in the amended version of the Forest Code.

In spite of weaknesses in the current FC, new mechanisms to redress deforestation are included. One of the most noteworthy additions is the Environmental Reserve Quota (CRA),

[5] Lawson et al. have taken data derived by (Grieg-Gran, Haase, Kessler, Vermeulen, & Wakker, 2007), converting ha into percentages: first the total amount of land that was illegally deforested in the Cerrado (45%) and the Amazon (90%) were assumed as the base values; second, total deforestation related to soy production, amounting to 7.2 Mha or (100%) between the Cerrado states and the Amazon states were allocated between these two areas, resulting in a share of 3.3 Mha (46%) in the Cerrado states and 4.9 Mha (54%) for the Amazon states. Since the Cerrado states are not considered in the scope of this thesis, the calculation was as follows: (54% x 90%) = 49%.

[6] The percentage for illegal deforestation due to beef and bovine production follows the same principle as soy. For the numbers see (Lawson et al., 2014) and (Grieg-Gran et al., 2007). The calculation was as follows: (81% x 90%)=73%

[7] The properties that were included in this LR debt reduction were "small" properties ranging in size from 20 ha to 440 ha in the Amazon. By including RPAs, restoration requirements are further decreased to 50%.

specified under the new Protection of Native Vegetation – Law, which is designed to facilitate the regularization of properties. According to this mechanism, owned areas with native surplus vegetation exceeding the FC-mandated minimum can be converted into tradable permits and used to offset LR debt on another property within the same biome and ideally the same state (*Incentivos Ecônomicos Para Servicos Ecossistêmicos No Brasil* 2015; Nepstad, Stickler, Filho, & Merry, 2008). While similar to the carbon credit regime under the Clean Development Mechanism (CDM) outlined in the Kyoto protocol, these credits do not capture the value of ecosystem services and therefore do not account for measures towards mitigating climate change attributed to deforestation.

A further noteworthy pillar of the amended FC of 2012 is the deployment of the Rural Environmental Registration (CAR). The conception of this instrument occurred against the backdrop of land title irregularities, much like the CRA and constitutes a promising instrument in verifying the validity of land titles. According to the latest issue of the Amazon Fund Activity Report, the sum of projects related to CAR activities amount to 13 projects at state, municipal and NGO level, with R$ 200 million being earmarked for the purpose of implementation. Conceived as the main instrument to promote and verify environmental regularity of rural properties, this innovative instrument developed in the Amazon region itself, can also raise other important issues on a number of other matters, such as land-title regularization and recovery of degraded areas (*Amazon Fund 2014*).

The Amazon Fund

The Amazon Fund (Fundo Amazônia), created in 2008 under former President Lula, is an instrument that assumes an important role within the context of the governance structure of interagency cooperation, in a joint effort to reduce emissions from deforestation and forest degradation (REDD+). The fund, which is administered by the Brazilian Development Bank BNDES, can be classified as an initiative that pursues the goal of raising funds for non-refundable investments in measures related to preventing, monitoring and combating deforestation, while fostering conservation and the sustainable use of the Amazon biome (*Amazon Fund - BNDES* n.d.). While the Amazon Fund constitutes an important mechanism domestically, supporting sustainable, economic development in the Brazilian Amazon, its importance is also highlighted in the international domain. Numerous international governments, like Germany and Norway, are supporting the fund with capital injections, as an opportunity to compensate for domestic greenhouse gases. It is also important to emphasize the vested interest and contributions from the private sector, from companies like Petrobras, a Brazilian petroleum producer. In the first instance, its purpose is to encourage conservation, restoration and enhancement of ecosystem services through the provision of financial and economic resources, but large-scale investments by foreign governments of close to US$ 1 billion, in the case of Norway, underline the importance of the fund in combating carbon emissions at large (*Amazon Fund - BNDES* n.d.). The fund subscribes to the requirements of a sub-national initiative, namely public mediation, social control and private investment (Forest Trends, 2015, p. 70). The projects approved within the framework of the fund are an indication that the mechanism acknowledges the importance of stimulating local forest economies by supporting cooperatives and local associations with ties to the territory and the land (*Amazon Fund - BNDES* n.d.). However, concerns have been issued over the continuity of the fund, attributable to the antagonistic context it is set in, namely an environment in which the environment is seen as an impediment to economic progress (*The Amazon Under Debate: Opportunities, Challenges and Solutions* 2010).

1.1.4 Three pillars to ensuring an economy based on an alive forest:

Multiple uses of the forest

The first impediment of a thriving economy in the Amazon based on a standing forest, is the narrow scope, with which it has been viewed by decision makers, businesses and investors. This is exemplified by the little breadth of activities that thrive on the conversion of the rainforest, with the view that the forest presents a hindrance to profitability. Multiple uses of the forest are not only implied with the production of timber and non-timber products, but also includes biodiversity protection, forest services and also the promotion and support of these services (Brouwer 2007, p. 149). While diversification is one aspect of using the Amazon Rainforest in multiple ways, it is also important that biodiversity goods like timber, are subject to sustainable management, discernible transparency and exhibit minimum invasiveness, while providing the necessary scale (*The Amazon Under Debate: Opportunities, Challenges and Solutions* 2010).

Hitherto, most activities, including cattle ranching and cultivation of non-native monocultures have neither valued native biodiversity, nor provided any value to ecosystem goods and services. Thus, multiple uses of the forest would be indicated by measures that account for ecosystem goods and services, leading to a diversification of activities. The reduction of carbon emissions from deforestation and degradation for instance, can provide a symbiotic relationship between ecosystem goods and services, by employing practices that are geared towards sustainable production. This includes the employment of technological innovation for better pasture management, the use of agroforestry systems and the recovery of degraded and deforested land, in order to increase productivity and decrease pressure on existing forest (Forest Trends, 2015, p. 70).

Communities in the Amazon are a good reference point for a large-scale application of these principles, by showcasing a "lifestyle of multiple productivity, multiple production, multiple products" (*The Amazon Under Debate: Opportunities, Challenges and Solutions* 2010, p. 165). A key in operationalizing this idea, is to incorporate ethno-biological knowledge of indigenous people that have perfected silviculture and agroforestry systems in the Amazon over millennia. These are measures that have the ability to diversify products as a concomitant by-product of creating emissions certificates. To this end, it is also indispensable to mainstream the uses of ecosystem services as part of a diversification strategy.

Enhancing the local value chain

A further ingredient to increase the value of the Amazon and ultimately discourage degradation and deforestation, is the enhancement of local value chains. Hitherto, the Amazon's forest economy has largely been premised on resource extraction, without adequate value creation and wealth distribution. Although this problem is not exclusive to the Amazon Rainforest, it is particularly visible in the Amazon, also in light of the fact that it boasts more productivity and wealth than many forests in the United States and Europe combined (*The Amazon Under Debate: Opportunities, Challenges and Solutions* 2010). The status quo is that many steps of the value-adding production chain are outsourced to other parts of Brazil, or to foreign countries. Similarly, most innovation to increase productivity of the value chain, e.g. research determining which genetic traits of tree species like the açai palm increase yields and hence profitability, comes from outside of Brazil (personal communication, Iguatemi Costa, July 30, 2015). Thereby, only a small fraction of the potential economic value of the Amazon Rainforest is captured, giving way to illegal and harmful economic activities. It is surmised, that this problem of unrealised value, can be redressed with Brazil's industrialization capabilities, which will enable products to be processed more intelligently and at greater scale. Accordingly, it is maintained that innovation and knowledge from other temperate forests around the world in conjunction with Brazil's technological infrastructure hold the key to achieving this end (*The Amazon Under Debate: Opportunities, Challenges and Solutions* 2010).

Social inclusion

Social inclusion has been cited as another pillar towards creating circumstances that are conducive to a sustainable forest economy. This entails, incorporating of oftentimes disenfranchised groups like indigenous people, *ribeirinhos*[8] and *seringueiros*[9], who possess a lot of contextual knowledge and know-how, yet are amongst the poorest people in Brazil. This situation has been implicated in creating an intolerable situation of economic opportunism in the Amazon, which, apart from deforestation, has led to concomitant activities like bribery, armed land feuds, murder and displacement of indigenous people. In order to include these marginalised groups, experts prescribe an education system that meets the realities of the forest rather than providing generic education, which includes local training of professional educators and vocational training (*The Amazon Under Debate: Opportunities, Challenges and Solutions* 2010). But inclusion does not only imply bringing people up to speed in terms of education; it also means connecting these groups to the rest of the country. This needs to entail a strategy that connects federal with local governance, fosters relationships between people in the region and the rest of Brazil, and strengthens information networks in the region. The latter, including better use of information and communication technologies is seen as a way "to break the vicious circle which comes from the current relative regional isolation" (*Amazonia Brazilian Challenge of the XXI Century* 2008, p. 21).

1.1.5 Incorporating sustainability into business strategy in the Amazon

Although the federal government and regional governments in Brazil are imperative in creating the framework conditions for a sustainable forest economy in the Amazon, conflicting agendas, priorities and strong differences in power relations are discernible among government ministries. Thereby, different views of the Amazon are perpetuated; unabated economic and industrial development, requiring the clearance of the forest on one hand and forest conservation on the other. However, integrated business models, accounting for environmental and sustainability performance, have the potential to bridge this gap. A number of companies sourcing timber and non-timber products from the Amazon have already operationalized integration as a means to close the chasm between the economic imperative and sustainability. In light of the multitude of interests and stakeholders present in the Amazon, the greatest prospect of success in the first instance, is the adoption of a stakeholder view (Clarkson 1995; Sachs, Post, & Preston, 2002), positing that relationships are invaluable assets and inseparable from corporate wealth. A second notion commensurate with the realities of the Amazon is corporate sustainability, which Schaltenegger and Burritt see as "a broad approach that includes various characteristics, in particular relating to the *contextual integration* of economic, environmental and social aspects" (Schaltegger & Burritt, 2005, p. 189). Nowhere else is an interplay of social legitimacy, efficient use of resources, competitive and financial success, as important as in the Amazon, and if managed properly, has great potential to alleviate lead causes of deforestation in the Amazon.

1.2 Problem definition

Deforestation in the Amazon has experienced a notable downward trend of 83% since the federal government's establishment of the Prevention and Control Plan of Deforestation in

[8] Traditional people living along banks of the Amazon and its tributaries, whose livelihood largely depends on fishing and small-scale farming

[9] Traditional rubber-tapping communities

the Legal Amazon (PPCDAM) in 2004. This is largely attributable to the collaboration between federal and state government and civil society (Amazon Fund 2014 2014). During the 13th Conference of the Parties in Bali, it was established that for REDD to be fruitful, developed countries needed to be given noteworthy economic incentives. It is within this context that Brazil vowed to reduce deforestation by 80% below the historical baseline of 19,500 km^2 year -1 by 2020 (Soares-Filho et al., 2010, p. 10821). The Amazon Fund has been instrumental in financing activities conducive to this end with the help of donations from governments and the private sector. Simultaneously however, a recent look at the PPCDAM does not echo the urgency of the stated goal, since the financial means to combat deforestation in the Amazon have fallen by 72% between 2011 and 2014 and are now down to only R$ 1.78 billion from R$ 6.36 billion in the period between 2007 and 2010, despite economic mechanisms and external aid (Forest Trends, 2015, p.58). Although it remains crucial that federal and state policies, as well as economic mechanisms continue to be an essential part of the fight against unsustainable, legal and illegal deforestation, more attention needs to be given to the role of the private sector and its ability to attach more value to a standing forest through profitable socio-environmental activities and integrated business models. In order to address this issue, the author seeks to examine business strategies at the company level, in order to exemplify ways in which beyond-compliance companies, active in the Amazon can visualize environmental and social measures, and accomplishments that have been conducive to generating financial value and mitigating deforestation and degradation. The primary focus will be on the Legal Amazon.

1.3 Objective and research questions

The stated purpose of this paper is to examine reputable sustainably-inclined companies in the Brazilian Amazon and how these are adapting to the complexities of the local context. The overall objective is to supplement the body of knowledge on sustainable businesses in the Amazon and how these can serve as an influential asset in redressing the problem of harmful economic opportunism in the Amazon.

a) What strategic environmental and social initiatives and measurements[10] are sustainably-inclined companies, sourcing from the Amazon Rainforest operationalizing, to achieve triple-bottom-line value in the given context and how can their actions be classified?

b) What achievements can be attributed to these initiatives and measures in fulfilling the triple-bottom-line criteria (economic, social, environmental)?

a) What driving forces are there for sustainably-inclined business operations and are there identifiable patterns between different companies?

b) What factors inhibit the expansion of sustainable business operations in the Amazon and how do they affect beyond-compliance businesses?

1.4 Methodology

To address the research questions at stake relating to the socio-environmental performance of companies sourcing overwhelmingly from the Brazilian Amazon, the author has chosen an adaptation of the Performance Framework, conceptualized by Dias and Sardinha (2001). The application of this framework enables the author to make qualitative queries on the examined companies' integration of environmental and social aspects and their management strategy.

[10] Measurements refer to indicators such as CO_2 emissions, ha of certified land, etc.

The framework was employed to first examine designated companies' initiatives, measurements and causal achievements thereof. Secondly, it was used to guide inquiries into noteworthy driving forces for undertaking measures towards better overall socio-environmental performance and to study important barriers to sustainable business in the region. In order to attain data to feed into the framework, a number of on-site and off-site interviews with company representatives and stakeholders have been conducted, guided by literature research. In furtherance of the conducted interviews, a questionnaire was used to enhance the collected data and to classify companies according to their environmental and social track record.

1.5 Scope

Companies

The companies chosen for this thesis include Natura, a Brazilian cosmetics company; Veja/Vert, a French-Brazilian shoe manufacturer; and Precious Woods, a Swiss timber company, largely operating in Brazil. The companies have been chosen, largely based on personal interest, accessibility and their ability to exemplify environmental and social innovation, leading to improved margins in some instances.

Country

Brazil's share of the Amazon Rainforest accounts for a majority of the total surface of the Amazon, while also deemed to be responsible for the loss of a quarter of all forests worldwide and a third of all tropical rainforests lost in the period between 2000 and 2012 (as cited in Lawson et al., 2014). The leading cause of deforestation can be attributed to agricultural conversion, in particular cattle ranching and soy production[11]. Brazil's relevancy for this study is, inter alia, reflected in the fact that illegal timber and wood products and beef/bovine, designated for export, originate either in Brazil or Indonesia. Both countries account for an estimated 75% of illegal land conversion of tropical forests for commercial agriculture worldwide between 2000 and 2012.

Value-oriented sustainability management viewpoint

The term value-oriented sustainability management denotes any form of management that simultaneously provides for the achievement of economical, social and environmental goals (Deegen 2001). To this end, the author has decided to employ an adaption of the Sustainability Balanced Scorecard, developed by Figge et al. (2002) in conjunction with a variant of the Performance Framework by Dias-Sardinha, & Reijnder (2001) and the Value Driver Model, conceived by Global Compact Lead (2013). This thesis will also be guided by the notion of the stakeholder view, advanced by Clarkson (1995).

1.6 Limitations

The context within which this thesis was set is Brazil, where the main language spoken is Portuguese. Therefore, one principal limitation of this work, is the limited number of interviews that the author was able to conduct, attributable to the language barrier in some instances, and irresponsiveness or a limited response rate to queries, in others. While the author has a fundamental understanding of Portuguese, interpreters and translators, if available, were essential to help with the transcription and performing of interviews.

Also, the section on strategic objectives of one of the companies is not complete, due to the non-completion of the survey that was sent out subsequently to one of the interviewees. For

[11] Soy production in the Amazon has almost ceased due to a voluntary moratorium in 2006 of soy producers, but still continues in other forest biomes in Brazil such as the Cerrado.

each company and institution, the author only chose the most authoritative representative, as interviews with other company representatives were oftentimes difficult to schedule. The case studies presented in this work are not to be seen as a generalizable blueprint, but rather as a snapshot of three companies from three different sectors and how these are consolidating strategy and action to meet the socio-environmental challenges of the Amazon, while staying profitable.

1.7 Ethical considerations

Ethical considerations were an indispensable element and taken very seriously since this thesis provides a concrete snapshot of the chosen companies' operations.
The following aspects were accounted for:

- For all on-site and off-site interviews, the interviewees were asked if they consented to being recorded.
- Interviewees were asked if any information they provided could lead to a conflict of interest or a confidentiality breach. This point was of particular importance because legal feuds between stakeholders and companies in the Amazon are a common occurrence.
- Additionally, it was essential to ask the interviewees if it was permissible to disclose their names in this work.

1.8 Audience

The proposed audience for this thesis entails companies, non-governmental organizations (NGOs) and regional governments. The researched companies, as well as other companies sourcing from the Amazon could find merit in this research as the intended outcome of this work is to elucidate some of the current strategic environmental and social measures taken by companies that have positively affected the financial bottom line, while enhancing future knowledge on synergetic integration of contextual initiatives.

Non-governmental organizations, such as WWF and Forest Trends, could find this research interesting, as it takes into account stakeholders' issues and their integration into environmental management strategies (EMS) of companies. Particularly in the Amazon, where NGOs liaise with companies and their respective environmental actors, including local communities, this thesis might provide some additional insights and avenues towards finding solutions that are in the best interest of implicated stakeholders.

Similar to NGOs, this research might be advantageous to state governments in Brazil, such as the State of Acre that could benefit from the synergetic and contextualized management concepts presented in this thesis. More specifically, the knowledge attained in this thesis presents a contribution towards numerous stated objectives, encompassing sustainable development, value-adding timber and non-timber related activities, a local and regional low carbon economy, and high social inclusion (*Incentivos Ecônomicos Para Servicos Ecossistêmicos No Brasil* 2015, p. 65).

1.9 Disposition

Chapter 1: Introduction and problem definition - The premise of this chapter is to contextualize the setting in which this research is set, while delineating the magnitude of the problem and the relevancy of this research. It then proceeds with a brief overview of the author's employed methodology to gather data and the method to address the stated research

questions. Finally, the chapter identifies the respective limitations of this thesis, followed by a characterization of the target audience and finishes with a preview.

Chapter 2: Evaluation framework and research methodology - This chapter seeks to detail the methodology and the corresponding framework to obtain and synthesize contextual data about specified beyond-compliance companies in the Amazon, pertaining to triple-bottom-line measures, initiatives and achievements.

Chapter 3: Literature review on separate and integrated social and environmental management systems - In this chapter different research streams, relating to corporate social and environmental management systems are examined with the stated goal of highlighting limitations of management systems hitherto and delimiting an applicable management system that can be applied in a multifaceted and complex business environment like the Amazon Rainforest. The chapter identifies four categories, namely separate environmental and social management systems, value-oriented sustainability management systems, the Balanced Scorecard and the themed balance scorecard.

Chapter 4: Case study presentation of performance indicators with corresponding achievements and classification of companies' actions - This chapter will illustrate the application of the Performance Framework in showing corporate socio-environmental measures and initiatives towards achieving profitability, along with a classification of these actions.

Chapter 5: Analysis of companies' driving forces for sustainability and barriers to being profitable and sustainable in the Amazon - This chapter pursues the goal of analysing driving forces of companies and their industry in the Amazon, while also demonstrating limitations of stated drivers. Additionally, this chapter addresses the barriers to conducting sustainable business in the Amazon, taking a macro perspective.

Chapter 6: Discussion of main implications of the analysis - The purpose of this chapter is to summarise the main findings and also to discuss the viability of the employed framework in the given context. It also delineates the significance of this research.

Chapter 7: Lists the main conclusions attained from conducting this research.

2 Research methodology and evaluation method for sustainable business strategies in the Amazon Rainforest

The intention of this chapter is to elucidate the research methodology and the framework used by the author to place the gathered information on sustainable business strategies by designated companies into the local context. The gathered evidence will help the author draw inferences on the strategic objectives that companies sourcing from the Amazon are pursuing, and also how context-specific factors are integrated strategically.

The premise of this thesis is to determine what strategic criteria and goals, three beyond-compliance companies sourcing from the Amazon are considering in their business strategy, in recognition of the local context and towards financial viability. It has been found that this is beneficial, as the majority of studies hitherto have not taken into consideration the link between environmental performance evaluation and environmental criteria and objectives in this context, and deduced a causal relationship thereof (Dias-Sardinha & Reijnders, 2001; Upham 2000). A disconnect frequently exists between a company's short-term, non-financial and operational activities and the long-term corporate strategic objectives, which warrants an approach that accounts for contextual non-financial success components and long-term economic prosperity (Perrini & Tencati, 2006; Schaltegger & Burritt, 2005, p. 189). Desired inferences and results were achieved, employing a form of triangulation, which assumed the shape of combining qualitative and quantitative methods to corroborate the legitimacy of the case, as found in Flick (2009). Therefore, in order to enhance the veracity of the individual companies as being beyond compliance, the participants of the interviews were subsequently provided with a questionnaire with the intention of standardizing the information gathered from semi-structured interviews. This information was also checked against any data available on the companies' websites and stakeholders that were familiar more generally with operations of on-site companies, as the reputation of companies sourcing from the Amazon is subject to a lot of scrutiny.

2.1 Research methods for data collection

2.1.1 Preliminary research

The primary objective of the preliminary research stage was aimed at identifying key drivers of deforestation in the Legal Amazon and also to determine corresponding initiatives to attenuate or eliminate legal and illegal deforestation and degradation. The second objective was to identify relevant stakeholders, i.e. authoritative individuals and organizations that possessed well-grounded knowledge on Amazon-related issues and the private sector in the Brazilian part of the Amazon basin. The impetus of this thesis was provided by a publication entitled *Amazon your business - Opportunities and solutions in the rainforest* by Maindert Brouwer, which provided ideas, examples of traded products and interviews with company representatives and their first-hand experience on business in the designated region. Material used during this phase included journal articles retrieved from Lund University's academic search portal, physical and electronic reports, as well as publications attained during on-site interviews.

The other area of concern for the author during this initial phase was to find a well-tested framework that could explain the correlation between business profitability and integration of socio-environmental aspects into companies' business strategies within a comparable situation.

The framework had to fulfil a number of expectations that were oftentimes different to incumbent evaluation frameworks, catering to large-scale corporations that are listed on famous sustainability indices like the Dow Jones Sustainability Index (DJSI)[12]. For instance, the author was very adamant about a framework that offered leeway for stakeholders to be included, i.e. a framework that was top-down, bottom-up[13] and participatory in nature, so opinions and needs of local communities and indigenous people could be factored into a strategic framework that echoed the need to generate value for all stakeholders. Therefore, different nomenclatures of frameworks were examined, namely top-down, bottom-up and fully integrated frameworks (bottom-up and top-down). While these frameworks exist, they are largely intended for macro-economic policy development and not for the appraisal of corporate strategy development.

2.1.2 Interviews

In order to address specific research questions or particular aspects of individual questions, two sets of interviewees were chosen, comprising company representatives from Natura, Veja/Vert[14], Precious Woods and external stakeholders, including indigenous people, NGOs and environmental consultancy groups. Primary knowledge was largely generated, using semi-structured expert interviews. Due to the novel application of the framework for research in the given context, the interviews had to satisfy two aims based on the typologies of Bogner and Menz (2009, pp. 46-47): first, it had to be *exploratory* to develop a clearer idea of the problem and structure of the area under investigation; second, the interview has to *systematize*, i.e. put the focus on knowledge of action and experience, derived from the interviewee's practice. The former, in particular, referred to interviewees from the stakeholder group, such as Aiton Krenak, of the Crenaque tribe, who is a leading representative of the indigenous movement in Brazil and a board member of a pulp and paper company. The information and insights gained in these interviews assisted the author in devising questions to companies and providing answers on aspects relating to the question of this thesis. The second category was instrumental in connecting the theory gained from secondary research to the interviewees real life experience on the ground and different strategic priorities, oftentimes deviating from standardized indicator sets. Essential criteria to determine knowledgeable and authoritative interviewees were: *acumen with regard to sustainable business strategy*, *rank in the company*, *familiarity with the company's overall objectives,* and most importantly, *the reality relating to the companies' operations on the ground.*

As for the practicalities of the author's primary research, snowballing within the author's private network was employed. In instances where snowballing was not directly possible, the social network LinkedIn was used to screen for special competencies, professional rank of a person, CV and physical location. Initially, individuals were contacted, using the LinkedIn mailing function. Interviews were conducted on the phone, Skype and in person. A complete list of the interviewees and sample questions can be found under appendix 7.1 and 7.2.

2.1.3 Questionnaire

In conformity with the antecedent interviews, a questionnaire was circulated to company representatives that chose to partake in the interviews. The structure of the questionnaire was

[12] Natura is listed on the DJSI.

[13] The 'top-down' approach means that experts and researchers define the framework and the set of the SDIs. The 'bottom-up' approach provides for the participation of different stakeholders in the design of the framework and the SDI selection process (as cited in Singh, Murty, Gupta, & Dikshit, 2009, p. 192).

[14] Veja is a French shoe manufacturer with headquarters in France and an operational counterpart in Brazil, entitled Vert.

in part modelled after the performance evaluation employed by Dias-Sardinha & Reijnders (2001, 2005) and Dias-Sardinha, Reijnders, & Antunes (2002) and the Value Driver Model (2013). To answer *research question 2* on drivers of, and barriers to sustainable business in the Amazon, context-specific questions were in part derived from reports and interviews with non-corporate stakeholders. The purpose was firstly, to place the designated companies in an industry context, while understanding the issues of beyond-compliance businesses, sourcing from the Amazon. Secondly, to understand what issues they are confronted with and also to delineate their incentives for driving socio-environmental measures in the Amazon.

2.2 Performance Framework

The stated intention of this thesis is to illustrate management characteristics of beyond-compliance companies sourcing from, and operating in the Amazon and to analogously outline measures, initiatives and achievements that can be classified as falling into the triple-bottom-line[15] category. To answer the majority of research questions presented in this thesis, a coherent step-by-step process is used in conjunction with the previously outlined research methodology.

To achieve stated objectives, the author decided to use an adaptation[16] of the Performance Framework designed by Dias-Sardinha, & Reijnder (Dias-Sardinha & Reijnders, 2005), as seen in figure 2. The specified purpose of this framework is to link strategically relevant environmental and social objectives and commensurate performance references to the performance evaluation format, while specifying management characteristics and performance indicators. The Performance Framework incorporates the Balanced Scorecard as a core element, originally developed by Kaplan & Norton (1992, 2001, 2007) and extrapolated to the sustainability theme by Figge et al. (2002). The Performance Framework by Dias-Sardinha & Reijnders, as illustrated in "Evaluating environmental and social performance of large Portuguese companies: A balanced-scorecard approach", was conceived to investigate whether environmental and social initiatives by leading Portuguese companies matched their predefined strategic objectives and associated performance references, and if these were linked to performance findings of the companies in question. The study also examined internal and external drivers influencing social and environmental initiatives and how they varied in different performance categories, while also assessing the viability of the themed balanced scorecard in showing the strengths of the links between the overall performance objectives and initiatives, measurements and achievements.

In adopting this framework, the author is able to address a particular limitation that earlier works by Figge et al. , Deegen, and Kaplan and Norton exhibit in the context of this thesis. None of the authors provide a practical application of the Balanced-Scorecard concept for an academic assessment of collective sustainable business strategies, rather they provide a manual on how companies can devise a framework that maps out strategic cause-and-effect connections within the organization. Accordingly, this thesis will use some of the steps outlined in the Performance Framework by Dias-Sardinha, & Reijnder. Some generic categories will remain identical with those invoked by the authors; all other elements, such as initiatives, measurements and achievements will be adapted to match the context.

[15] The *triple-bottom-line* concept will be used interchangeably with *sustainability*, denoting social and environmental aspects that are impacting financial performance.

[16] While Dias-Sardinha, & Reijnder used a set of similar companies with the same performance objectives and grouped them into one balanced scorecard, the author of this study analysed each company individually, using a similar process.

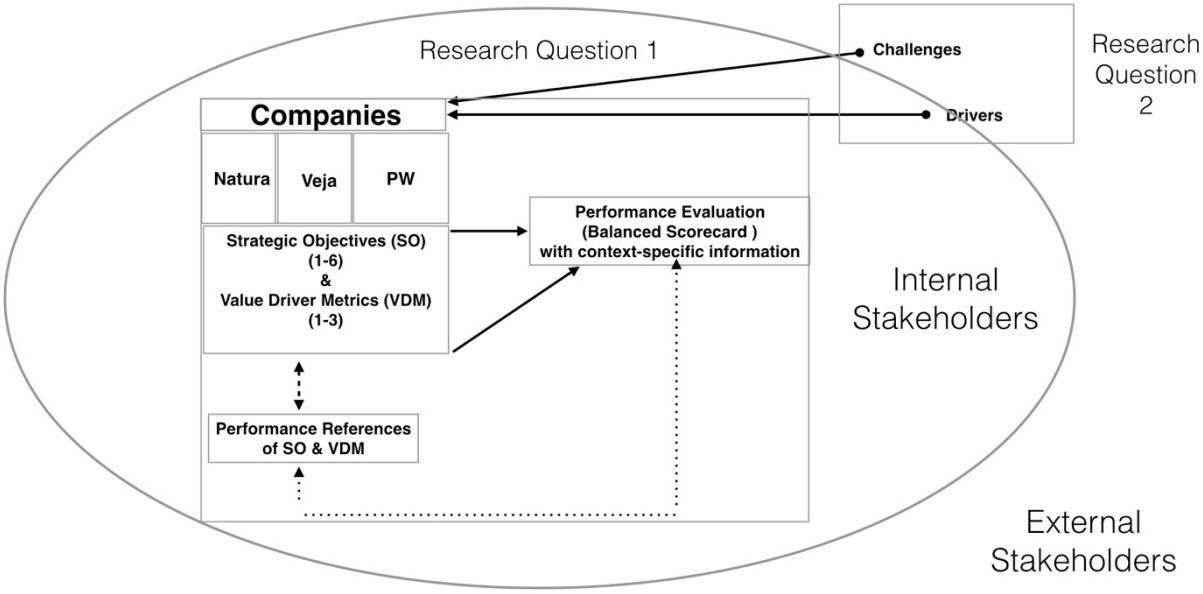

Figure 2: Evolutionary Performance Framework for assessing sustainability performance strategies of companies

2.2.1 Step 1: Determine relevant organisational levels of a company and describe company setting

Step 1 presents an aberration from the methodical proceeding of Dias-Sardinha & Reijnder, and Figge and Hahn, in that it not only specifies the business unit, but also the context of the company. Regarding the point of business unit designation, Figge et al. maintain that for small and medium-sized enterprises the business unit level may be the same as the corporate level, while in large companies, there might be different departments for different customer segments (2002, p. 277). Within the context of this thesis, the companies vary between SMEs and large companies and have a site-specific business unit in the Amazon, with differing levels of authority and capabilities. In some instances, the corporate level is included, if deemed necessary due to a clear connection between all-encompassing policies and Amazon operations. This helps establish the strategic importance of relevant units and the corporate level's dependency on these units for the overall strategy.

As a supplementary step, the author has also chosen to elucidate the overall corporate context of examined companies to establish a link between their domestic setting and the social and environmental context, directly linked to the company's operations in the Amazon. The author added this aspect to showcase, more generally what it means for these companies to operate in the Amazon versus operating, according to well-defined and examined economic parameters, under conventional circumstances. This is in step with Reed who contends that there are two components to establishing context: (1) identifying key stakeholders and (2) defining the system that is relevant to the problem being studied (2006). Although this first step does not pertain to the research questions per se, it allows for better contextualization.

2.2.2 Step 2: Determine applicable strategic objectives and company-specific performance references

Step 2 sets out to explore and answer *research question 1a.* The author will draw on the six strategic objectives and corresponding performance references, defined by Dias-Sardinha, & Reijnders, to assist in devising a normed social and environmental management profile of the

companies in question, exhibited in table 1. The six objectives and corresponding performance references, which mainly refer to broad standardised environmental and social management systems and principles, e.g. GRI, AA 1000, SA 8000 and the precautionary principle, were complemented with objectives and performance references cited in *The Value Driver Model: A Tool for Communicating the Business Value of Sustainability*, as seen in Table 2. The Value Driver Model was consulted for its ability to illustrate, which of the value driver metrics, namely growth, performance and risk management, are explicitly linked to value-adding sustainability reference categories, such as *new markets and geographies from sustainability-advantaged products*, *operational efficiency through better use of natural resources*, and *reputational risk aversion through provision of socially and environmentally responsible products*. In this step, the examined organizations were asked to specify their company's objectives and corresponding performance references, as shown in appendix 7.3. To choose multiple performance objectives is not only closer to reality but also tends to yield better environmental performance (Mauser 2001, p. 29). Given the case study approach, differing from Dias and Reijinders' company-survey approach, the author also gave companies the chance to choose from individual performance references within the multiple objectives. This was done in order to enhance the accuracy of the selections made by the interviewees. To achieve this end, questionnaire respondents were asked to colour-code the individual performance references that they thought were most suitable to the objectives they chose, as seen under appendix 7.3. This step in particular, is aimed at bringing a consistent and standardised dimension to a highly contextual and structural analysis of the three companies analysed in this thesis, which also aligns with Aragón-Correa's perception (1998).

Table 1: Strategic objectives and related performance references for organizations

Strategic Objectives	**Strategic Objectives**
Pollution control/ Regulatory compliance: Compliance with relevant regulations, voluntary agreements (such as covenants), and general codes of conduct voluntarily adhered to.	No violations of regulations, voluntary agreements, and general codes of conduct voluntarily adhered to
Pollution Prevention: Optimization of resources consumption and prevention of waste (including emissions) during production and high negative-impact wastes, in line with financial targets of the company, such as cost reduction	Reference values of best preventive technologies and practices available to the sector Proactive attitude concerning future changes in the law Reduction of environmental burden, when compared with average company in compliance (normative) Procedural: effective management structure for pollution prevention, preferably following standards related to an EMS, with effective monitoring and information systems
Eco-Efficiency: Reduction of resource intensity and minimization of environmental impacts of production and products/services, together with value creation by	Application of most eco-efficient practices, technologies, and products/services available, preferably using a product life-cycle perspective Measurable reduction of environmental burden, when compared with average company in compliance Value creation coupled with continual improvement

continuous incremental improvement	Procedural: following standards related to an EMS
Eco-Innovation: Introducing radical environmental improvements pertinent to production, products, and services to achieve minimum environmental impacts, using a product/service life-cycle perspective	Use of predefined goals, e.g. 100% share of eco-innovated production and products, sector-leader achievements in eco-innovative markets Measurable reduction of environmental burden , when compared with average company in compliance (normative) Procedural: accountability for life-cycle impacts of products/services, preferably following standards related to life-cycle analysis (LCA) and eco-labelling
(Eco)-Ethics: Using environmentally related normative values (e.g., zero pollution) to guide organizational activities and emphasize social aspects	Specified principles (e.g. zero discharge, zero waste, use of only renewable energy) or general environmental decision-making based on ethical concerns Procedural: applying ethical requirements, preferably use of voluntary standards as guidelines, e.g. AA 1000 (AccountAbility, 1999), SA 8000 (SAI, 2000) Reporting, preferably applying Sustainability Reporting Guidelines requirements (GRI, 2000)
Sustainability: Guiding organizational activities by consideration of environmental, social, and economic justice between generations and with respect to contemporaries. In the case of environmental performance, this objective can be operationalized when organizational activities leave the environment no worse off at the end of each accounting period than at the beginning, complemented with environmental restoration or remediation when environmental damage is detrimental to contemporary generation.	Application of the Precautionary Principle (EEA, 2001) (when in doubt as to the long-term environmental and human safety of a product due to lacking data, your company won't allow the product to enter the market) Integration of all costs that are currently external into cost accounting (Total Cost Accounting) and achieving an acceptable profit while doing so Use of sustainably generated renewables in place of dissipatedly used inputs Reduction of environmental burden by up to a factor of 50 (Reijnders, 1998), if compared with average company in compliance (dependent on, among other things, the sector and assumptions as to overall production and consumption) Preventing negative product/service life-cycle related impacts on future generations Procedural: compliance with all pre-referenced standards. Integrated management of environmental, social and economic aspects of triple bottom line by using an integrated management system (e.g. SIGMA Project, BSI, 2001). Involvement of and transparency to third parties (e.g. apply GRI, 2000)

Source: Dias-Sardinha & Reijnders, 2001, 2005

Table 2: Adaptation of the Value Driver Model

Value Driver Metrics	**Performance References**

Growth Revenue growth from sustainability-advantaged products, services and/or strategies (S/G)	**New markets and geographies** Expanding market share based on enhanced demand for sustainability- advantaged products
	New customers and market share Gaining sales to new customers and geographies based on brand and reputation for sustainability product leadership, especially where those attributes are differentiators
	Product and service innovation Developing innovative sustainability-advantaged products and services that better meet customer needs while minimizing unwanted social or environmental consequences and/or enhancing desirable social and environmental outcomes
	Long-term strategy Implementing a long-term strategy and plan, along with the required investments, to deliver sustainability-advantaged growth
Performance Total annual cost savings (and cost avoidance) from sustainability-driven productivity initiatives (S/P)	**Operational efficiency** Operational efficiencies, resulting in cost savings and/or cost avoidance through better use of natural resources, reduced wastes and/or finding better alternative materials with lower costs and impacts
	Human capital management Reducing the cost of attracting and retaining top talent to the firm as a result of the firm's commitment to sustainability and the employees' perceived value of that commitment, as well as increased worker productivity due to skills and safety training, and inclusive and equitable work environments
	Reputation pricing power Margin improvement, potentially increasing price and volumes from customer perception of enhanced value from sustainability–advantaged products.
Risk Management Reduced sustainability-related risk exposure that could materially impair a company's performance (S/R)	**Operational and regulatory risk** Decreasing levels of environmentally critical and/or constrained resource use; limiting business interruptions and risk of losing the license to operate; reducing emissions of key pollutants or toxins; and other areas that could expose the firm to regulatory actions or penalties, as well as increasing adherence to established sustainability-related operating standards, including results of related audits and certifications.
	Reputation risk Increasing assurance via assessments, audits and/or certifications that the firm's suppliers are providing reliable, responsibly produced products and services in accordance with the firm's policies, industry codes and international standards
	Supply chain risk Decreasing exposure to reputational risks arising from a variety of actions including fines, negative legal judgments, boycotts, public protests and/or negative media attention through implementation of proactive policy and procedures that limit the risk of social and environmental harm
	Leadership and adaptability

Source: The Value Driver Model: A Tool for Communicating the Business Value of Sustainability. (2013)

2.2.3 Step 3: Performance evaluation using the sustainability-balanced- scorecard approach

In order to address the contextual aspects of different companies operating in the Amazon, i.e. specific initiatives, measurements and achievements, the sustainability balanced scorecard was chosen to meet the need for contextual description of the companies presented in this work. A balanced scorecard dealing with environmental and social issues and the financial

consequences thereof is useful to highlight priorities and to ensure that important areas are not neglected, as has been pointed out earlier. The author has chosen a thematic balanced-scorecard format that uses four perspectives, of which the second perspective presents a slight modification of the second one used by Kaplan and Norton, namely the customer perspective. It is replaced by the stakeholder perspective, as proposed by Dias-Sardinha & Reijnders. Additionally, depending on context, the author has chosen to employ a triple-bottom-line and/or financial perspective. The stakeholder perspective has been chosen over the customer perspective due to the ample stakeholder concerns, often issued on site, especially in the Amazon, where many interests are pitted against one another. These can, positively or adversely, affect a company's operations on the ground.

Exemplary stakeholder scenarios that can affect a company's operations in the region are illustrated here. On one hand, there are indigenous tribes that feel disenfranchised and adamant about having their land titles recognized and maintained, a strong presence of social and environmental NGOs that act as watchdogs over new legislation and companies in the region and the federal and local governments trying to enforce the Forest Code and legal land titles. On the other hand, there are local residents, particularly farmers that want to establish a livelihood, sometimes resorting to illegal and environmentally harmful activities under the auspices of corrupt officials. In such an environment a reputable and legally sound company needs to tread carefully, in order not to incur legal costs, or worse, risk losing its customer base due to an environmental or human-rights related scandal for instance.

The *triple-bottom-line perspective,* if chosen over or supplementary to the financial perspective, connotes environmental and social aspects and financial consequences thereof that the company attends to and that are conducive to adding value. This is considered against the backdrop of the main environmental/social strategic objective(s) (Dias-Sardinha, & Reijnders, 2005). It features measurements, initiatives and achievements relating to governance, compliance, social and environmental issues, and the financial aspects thereof.

Alternatively or in addition to the triple-bottom-line perspective, the top-tier perspective, namely the *financial perspective,* does not significantly deviate from the original BSC by Kaplan and Norton, in order to meet the author's objective of illustrating how contextual environmental and social circumstances in the Amazon affect a company financially (1992)[17]. This perspective is indicative of the economic effects brought on by the integration of strategic environmental and social considerations. Also, the financial perspective reflects the end point of the cause-and-effect relationship chain between all other perspectives. This perspective entails specific measurements, objectives, initiatives, achievements and indicator categories in the sphere of *revenue growth* and *productivity growth*, while also featuring the category *risk management*, adopted from the Value Driver Model, as it not only is a critical indicator for investors and shareholders, but also because companies in the Amazon are subject to a considerable number of risks, including legal feuds with indigenous people or supply chain risks due to the volatility of local circumstances for instance. Since the financial perspective presents a reflection of the other perspectives, measurements, objectives, initiatives and achievements of all other perspectives will be marked with the acronyms revenue growth (RG), productivity growth (PG) and risk management (RM), if they directly affect the financial perspective of the company.

The second perspective, will adopt the view of *stakeholders* more generally, which is a deviation from the customer perspective presented in the original BSC. The assumption of this view resonates with Clarkson's stakeholder framework (Clarkson 1995), while the practical

[17] The unaltered financial perspective in the sustainability balanced scorecard has also been used by Figge et al. (2002) and Deegen (2001).

application corresponds closely with Dias-Sardinha & Reijnders. In this perspective the main question is "which internal and external environmental and social measures does the company address to fulfil its financial mandate?". Especially, indicator categories, such as *community relations*, *business ethics*, *labour practices and relations with non-governmental companies* are featured.

The third perspective illustrates which *internal and external processes* the company has to adhere to and measure, pertaining to its environment and social aspects in order to fulfil its financial commitments and commitments to relevant stakeholders. Initiatives, measurements, objectives, and achievements in this perspective follow the categories *management structure and systems*, *use of management tools* and *technology and products/services*.

The fourth perspective, *learning and growth*, deals with the question "what learning and innovation skills does the company account for, towards addressing strategically relevant environmental and social aspects, resulting in financial returns?". Initiatives, measurements, objectives, and achievements will be classified according to the categories put forward by Figge et al., including employee potentials, technical infrastructure and climate for action, also seen in figure 4 under section 3.3.1.

2.2.4 Step 4: Specify internal and external drivers for beyond-compliance/ corporate sustainability in the Amazon

Drivers for beyond-compliance/ corporate sustainability in the Amazon

In this step the companies' driving forces for implementing environmental and social efforts are examined, to determine the pressures that these companies face in light of a large stakeholder base, and to solidify the link between the pre-determined objectives, e.g. eco-efficiency, eco-ethics and their contextual practices, illustrated in the SBSC. Internal and external drivers were partially derived from Dias-Sardinha & Reijnder and in some cases modified and augmented with contextual information, drawn from relevant literature and from interviews. While some drivers were discernible during interviews with authoritative company representatives and external stakeholders, as well as the literature, the author also incorporated some of his own assumptions on incentives towards incorporating environmental and social aspects into the companies' business strategy. In order to corroborate the drivers resulting from this process, the interviewees were confronted with a compilation of external and internal drivers in the follow-up questionnaire, which was available in English and Portuguese. The drivers to be included in the compilation were to illustrate generic business realities and contextual considerations on one hand, and long-term projections for businesses sustainability in the Amazon, on the other hand.

Barriers to operating a sustainable business in the Amazon

Different from the Performance Framework, peripheral barriers to the expansion of sustainable businesses in the Amazon are examined, corresponding with the final research question. This step aims at underlining the political, cultural and physical issues that need to be overcome, or at the very least, be pragmatically considered, for businesses to excel that have a sustainability agenda. To achieve this end, the literature was consulted first, followed by interviews with authoritative company representatives and knowledgeable stakeholders. Similar to the previous step, the company representatives were prompted to decide in the follow-up questionnaire, which barriers they believed inhibited the expansion of sustainable businesses in the Amazon most. To determine the most apposite barriers used for the questionnaire, based on overlap of theoretical and empirical evidence, the author juxtaposed issues mentioned in the literature with the transcribed interviews.

3 From separate social and environmental management systems to the themed balanced scorecard

This chapter is aimed at performing an analysis of different beyond-compliance, or sustainably-inclined management systems and philosophies employed to date in a wider context by companies and how these have influenced the author's decision to employ a variant of the Balanced Scorecard in the context of beyond-compliance business operations in the Legal Amazon. As a departure point, this chapter will discuss the literature on notions regarding corporate sustainability, highlighting weaknesses of Corporate Social Responsibility (CSR) as it is overwhelmingly practiced these days, and the issues of separate environmental and social management systems. The following sections within this chapter will then review the literature on value-oriented sustainability, review the fundamentals of the Balanced Scorecard and how it can be employed within the context of corporate sustainability. By elucidating the body of literature on environmental management strategies and frameworks, the author seeks to delimit the rationale for employing each and thus corroborating the soundness of a variant of the sustainability balanced scorecard for the purpose of this thesis.

Conducting business operations in the Amazon constitutes an intricate combination of many factors and variables that might oftentimes not be directly linked to a company's primary goal, namely to generate profit for its shareholders. Although this commitment is the undisputed motivation for running a for-profit business, the solitary view of shareholders and profit-producing activities—during conception of a business strategy—runs into danger of missing non-market factors and other stakeholders that can severely stint or increase the growth of margins in the long and short run (Clarkson 1995; Deegen 2001; Freeman 2010; Lee & Ball, 2003). In relation to business in the Amazon, a holistic view of issues, potential complications and stakeholder involvement is not only instrumental in leading a business to success and averting risk, but also has the potential to replace a ruinous and parochial rainforest economy that is not only threatening the livelihood of local and indigenous communities, the flora and fauna, but also the planet at large.

3.1 The problem with separate environmental and social management

Corporate sustainability at odds with sustainable development

Fundamentally, there is concern over the veracity of the sustainable corporation, which is rooted in the macroeconomic concept of sustainable development. Here, the notion is advanced that environmental integrity, economic prosperity and social equity are inherent elements to sustainability, while treating future generations equivalent to current generations (Gladwin, Kennelly, & Krause, 1995). Sustainable development first became prominent with the report by the World Commission on Environment and Development, which stated that "humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs" (*Our Common Future, Chapter 2: Towards Sustainable Development - A/42/427 Annex, Chapter 2 - UN Documents: Gathering a Body of Global Agreements* n.d.). Extrapolated to the corporate level, this is said to suggest that companies are dependent on social and environmental resources and vice versa, they hold the key to sustainable development at the macro level. However, it is maintained that, much like CSR sees environmental and social issues as subordinate to core business, most of the literature on corporate sustainability conceives of environmental and social aspects as an expedient mean to achieve profitability, also referred to as bounded rationality by Hahn and Figge (2011). Correspondingly,

sustainable development and corporate sustainability are not equal in merit, unless the three pillars, environment, social and economic are considered equivalently, including its trade-offs (Hahn & Figge, 2011; Hahn, Figge, Pinkse & Preus, 2010).

CSR - Normative and isolated from true sustainable management

Corporate social responsibility (CSR) has become emblematic for a corporate culture that seeks to communicate its care for nature and society and oftentimes the term is used interchangeably with sustainability, in spite of the lacking long-term perspective inherent to sustainability (Steurer, Langer, Konrad, & Martinuzzi, 2005; Van Marrewijk, 2003). Since sustainability is rooted in the nomenclature of sustainable development, CSR historically falls short of the economic dimension. The preponderant application of corporate social responsibility, largely happens in parallel to the central management of a business (Steurer et al., 2005). This results in a situation where the core management system of a business performs tasks that entail the creation of a business strategy, operational planning and controlling of business activities, while environmental and social aspects are treated analogously as peripheral matters (Deegen 2001). In reference to CSR, Clarkson asserts that this is attributable to the fact that the term was coined outside of business and that it is legitimate to ask to whom the company owes social responsibility and also about what (1995).

Congruent with Clarkson, Friedman maintains that CSR is to be discussed on an institutional level, positing that business is to be seen as separate from society (1970). This assumption is warranted, considering that a large body of research relating to CSR focuses on normative theoretical knowledge that stresses "oughts" and "should", while the non-normative body of literature emphasizes the "hows" and "whys" (Lockett, Moon, & Visser, 2006, p. 118). The distinction between stakeholder and social issues can be made, it is argued, by considering the absence of legislation or regulation, in which case an issue is no longer a social issue, but becomes a concern of stakeholders. Irrespective of the stakeholder relevancy of social and environmental concerns however, many businesses see these issues as separate from the actual management of the business. Therefore, Deegen maintains that problems arise when attempting to coordinate these two management systems in parallel, frequently leading to an overlap of functions and ultimately low economic and ecological efficiency relative to the effort (2001).

Efficacy of separate environmental and social management systems

While the previous points have illustrated misconceptions of sustainability in business and the weaknesses of CSR within the context of integrated business management systems, it is essential to reflect on the literature pertaining to the efficacy of environmental and social management systems within the corporate realm. A commonly held belief is that environmental and social management systems and the use of indicators translate into better financial performance by default, or at the very least, environmental performance of a business. Isolated from the desired positive economic outcome, some studies indicate that companies that have implemented voluntary environmental management systems, e.g. ISO 14001 and the European Eco-Management and Auditing Scheme (EMAS), in fact did not achieve desirable environmental outcomes or even performed worse in terms of environmental performance (Berkhout et al., 2001; Dyllick & Hamschmidt, 2000; Schaltegger, Synnestvedt, & Vei, 2001). Corresponding with this, Deegen (2001) maintains that the inefficiency of today's EMSs is discernible in the sphere of environmental reporting and generation of indicator sets, e.g. the Global Reporting Initiative (GRI) and ISO, that have focused on capturing a large breadth of indicators in different sectors, while weakening their connection to the core business. Concomitantly, he contends that environmental aspirations

are only echoed in a company's norms, but deliver little strategic value and hence, the company has very little stimulus to enhance its ecological potential and responsiveness to external influences. This suggests that, from a legitimacy theory perspective, the strategic value of environmental and social management mechanisms is not only critical for positive cross-sectional outcomes but also for the inherent purpose they were designed for. Legitimacy theorists like Patten for instance found a significant correlation between a company's size, its environmental industry classification and the quality of reporting, while profitability measures were considered insignificant (1992, 2002).

From the company and shareholder perspective the effectiveness of an environmental management system is usually measured in the company's financial performance. Therefore, the deployment is supposed to meet the expectation that a company's financial performance will be improved with deployment of an environmental management system. However, whether the link between an EMS and better financial performance is positive, largely depends on the type of EM and how well it accounts for a dynamic business situation, as evidenced by Schaltegger et al. (2001). Considerable differences, for example, are found in the literature about the connection between environmental and financial performance. Wagner, for example, who performed a literary review of different studies on measuring this relationship, concludes that a variance in results is discernible due to methodological aberrations, differences in research design and intrinsic factors, i.e. factors that account for different contexts, such as the company-internal or country level (2001). Similarly, Chen and Metcalf, who factored in the size of a company, did not find a significant connection between disclosing CSR and profitability, contrary to an empirical study conducted by Spicer (1980).

3.2 From value-oriented sustainability to the Sustainability Balanced Scorecard

This section, will provide a literary review on aspects relating to integrated and value-oriented sustainability management, a delineation of the Balanced Scorecard and finally how it can be extrapolated to the area of sustainability. Similar to the previous section, the author seeks to provide literature on the differentiation of terms in order to create an unambiguous working definition of integrated and value-oriented sustainability management. Analogously, this section also pursues the goal of showing the rationale and benefits of pursuing such a management strategy.

From means-to-an-end to integrated strategies

As noted in the previous section, CSR falls short of the definition of sustainable management of a company, as it does not fulfil all the criteria inherent to sustainable development. Much like the transposition of sustainability into CSR, the word sustainability has been subject to much contextual stretching, as evidenced by the indiscriminate use of environmental and social concepts in the context of sustainability (Deegen 2001; Hahn & Figge, 2011). This is not only symptomatic for common parlance, but according to Gladwin et al., there have also been failed attempts by scholars to establish sustainable development as a societal concept (1995). The problem becomes even more pronounced when trying to properly relate this term to the corporate level (Bansal 2005; Hahn & Figge, 2011). Hahn and Figge find that the problem of integration of environmental and social aspects into corporate management is essentially a teleological one, attributable to the submissiveness of these aspects to economic profitability (2011). Accordingly, corporate sustainability is limited by instances where social and environmental aspects contribute to economic profitability. In a similar vein, efficiency and multidimensional approaches are criticized for their inadequate guidance on integrating social and environmental aspects into economic considerations (Hahn and Figge, 2011). Efficiency

approaches, like tracking eco-efficiency, have been advocated for being able to link socio-environmental burden to profit per produced unit of output (DeSimone & Popoff, 1997).

Inversely, Dyllick (2002) argues that gains in efficiency are likely to be offset by the growth of a company over time. Multidimensional approaches, it is asserted, are oftentimes aggregated into one composite indicator, making weighing of individual criteria difficult (Figge & Hahn, 2004; Hahn & Figge, 2011). Also, due to their complexity, they are not favoured in corporate decision-making (Jensen 2002). According to Figge and Hahn (2011), these models come out in favour of profitability, at the expense of equal consideration of environmental and social consideration, which they, as previously established, refer to as bounded rationality.

Incumbent notions of corporate sustainability thus differ from earlier literature that highlights the need of business strategies that meet its current financial goals and stakeholder needs, while not adversely affecting future environmental and human resources (Deloitte & Touche, 1992; Dyllick & Hockerts, 2002; Steurer et al., 2005). Thereby, instead of corporate sustainability driving profitability, Figge and Hahn (2001) prescribe inclusive profitability, which calls for a teleological rather than an economic integration, i.e. the three pillars of corporate sustainability inherent to the concept of the triple-bottom-line concept (Epstein & Roy, 1997) are given equal weight. In relation to bounded rationality, they put forward a valid criticism that has been true in many instances, namely that an economic predominance is discernible during integration relative to environmental and social aspects (Hahn & Figge, 2011, p. 332).

The intersection of the stakeholder company and sustainable development

However, what Figge and Hahn fail to acknowledge is the power that society wields on the financial bottom line of a company, which Hill suggests, has the ability to "alienate a company from the rest of society, resulting in reduced reputation, increased costs, and decreasing a shareholders' value through erosion of its license to operate" (2001, p. 32). Accordingly, Hahn and Figge's proposition resonates more closely with Snider et al.'s conception of CSR, who contend that CSR describes the interaction of a company with society at large (as found in: Steurer et al., 2005). In a similar vein, Clarkson contends that managers pay little attention to CSR, as it is a term coined outside of the business world; similarly, sustainable development (SD) is also a concept that originated outside the business world (1995). For this reason, Steurer et al. extrapolate the concept of SD to stakeholder relation management (SRM), yielding SD-SRM (2005). Similarly, this connection is illustrated when considered from the vantage point of preferences that different stakeholders have. While, Investors for instance have a great interest in the financial performance of a company, NGOs have a greater interest in superior environmental and social performance, meaning that the level of acceptance for low or non-performance is tantamount to null, as seen in figure 3 (Deegen 2001). The gist of stakeholder commitment rather than a company's commitment to society as a whole is reflected in the infamous quote by Friedman, who was quoted as saying "that the business of business is business" (*The Social Responsibility of Business Is to Increase Its Profits, by Milton Friedman* n.d.).

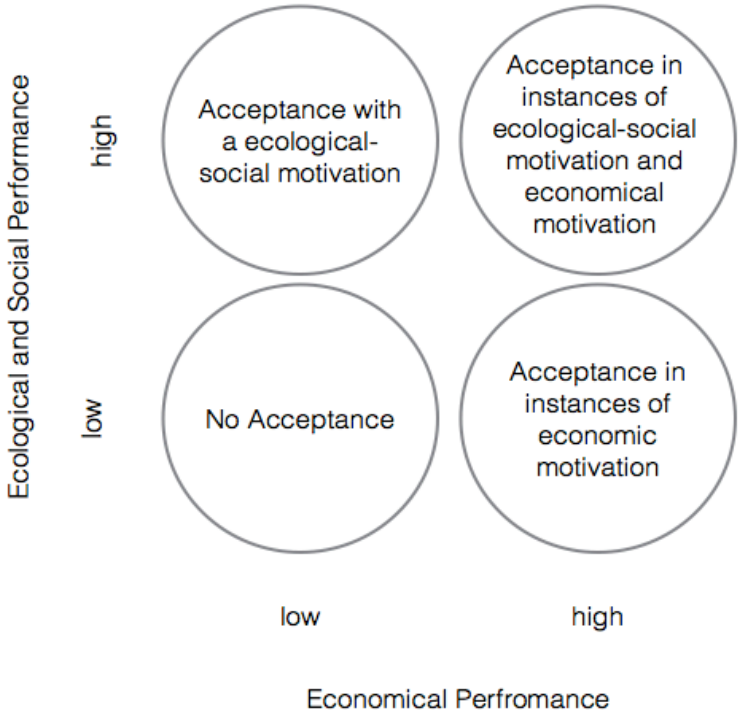

Figure 3: Consensus Matrix

Source: Deegen, 2001

Non-value-adding approaches are a recipe for failure

The dangers of not pursuing a value-adding approach are illustrated by Thomas Deegen, who firstly maintains that companies pursuing a course that does not explicitly add to the financial bottom line of the company, but instead incurs costs, will only follow this strategy as long as the company performs well (2001). Sustainability items are usually the first items of expenditure to be scrapped in instances where the company value is in jeopardy. Secondly, Deegen issues concern over the possibility that companies not pursuing environmental and social management measures as part of a strategy to yield financial value, are less likely to be mimicked or looked up to by competing companies. Inversely, the opposite is true, when a company creates financial value through these measures, an imitation effect is likely to ensue. Lastly, Deegen argues that a company that defaults on its economic obligations within the triple-bottom-line concept is by definition not sustainable, since it does not only matter that the three aspects are existent, but also their relation to one another. Therefore, Deegen stresses the urgency of a complementary relationship between the three pillars of sustainability (Deegen 2001, p. 8), similar to Hahn and Figge (2011). In instances where this is accomplished, a company exhibits a strong sustainability profile (Deegen 2001; Steurer et al., 2005). Inversely, Deegen posits, that in instances where the three pillars are addressed, but managed separately, it is unlikely that a company will exhibit strong overall sustainability performance (2001).

3.3 The Balanced Scorecard

This section seeks to present the core ideas and fundamental working principle of the Balanced Scorecard. In parallel, these sections will delineate the significance and role of the

Balanced Scorecard in the context of value-oriented sustainability strategies by analysing relevant literature in this field.

3.3.1 Fundamentals of the balanced scorecard

Function and working mechanism of the Balanced Scorecard

The goal of the BSC, as articulated by Kaplan and Norton, is to convert soft factors and intellectual property aspects into long-term financial successes, thereby making them controllable. To this end, they propose performance measurements that follow the lead of the corporate strategy (Kaplan & Norton, 1992, 2004, 2005, 2007). In order to bridge the gap between business strategy and operational planning and thereby also accounting for the long-term business perspective of a company, the BSC prescribes that a previously defined and continuously revised business strategy is applied within four business perspectives, as seen in figure 4. Thomas Deegen provides a brief overview of the respective views within the original Balanced Scorecard (Deegen 2001, p. 13). These can be summarized as follows[18]:

The *Financial Perspective* is the top-tier perspective of the BSC. The purpose of the indicators within this perspective is twofold: first, they define the desired financial outcome of a business strategy; second, they establish a causal relationship between all other indicators featured in the different perspectives and ultimately it can be determined if the totality of all measures taken is profitable.

The *Customer Perspective* outlines market and customer segments, within which the company is meant to compete. The value proposition to the customer, by which the organization will attain its competitive edge in the designated industry, is delineated by the strategic goals, indicators and measures.

The *Internal Process Perspective* provides insight into the breadth of operational processes, which are necessary to fulfil the customer's value expectation in the respective markets in which the organizations compete, while simultaneously satisfying stakeholder expectations.

The *Learning and Growth Perspective* features those indicators that are illustrative of the infrastructure necessary to achieve the goals of the other three perspectives. It highlights employee competencies, technology and corporate culture, i.e. motivational aspects of and goal orientation of employees.

[18] Also see Kaplan and Norton (1992; 2004; 2005).

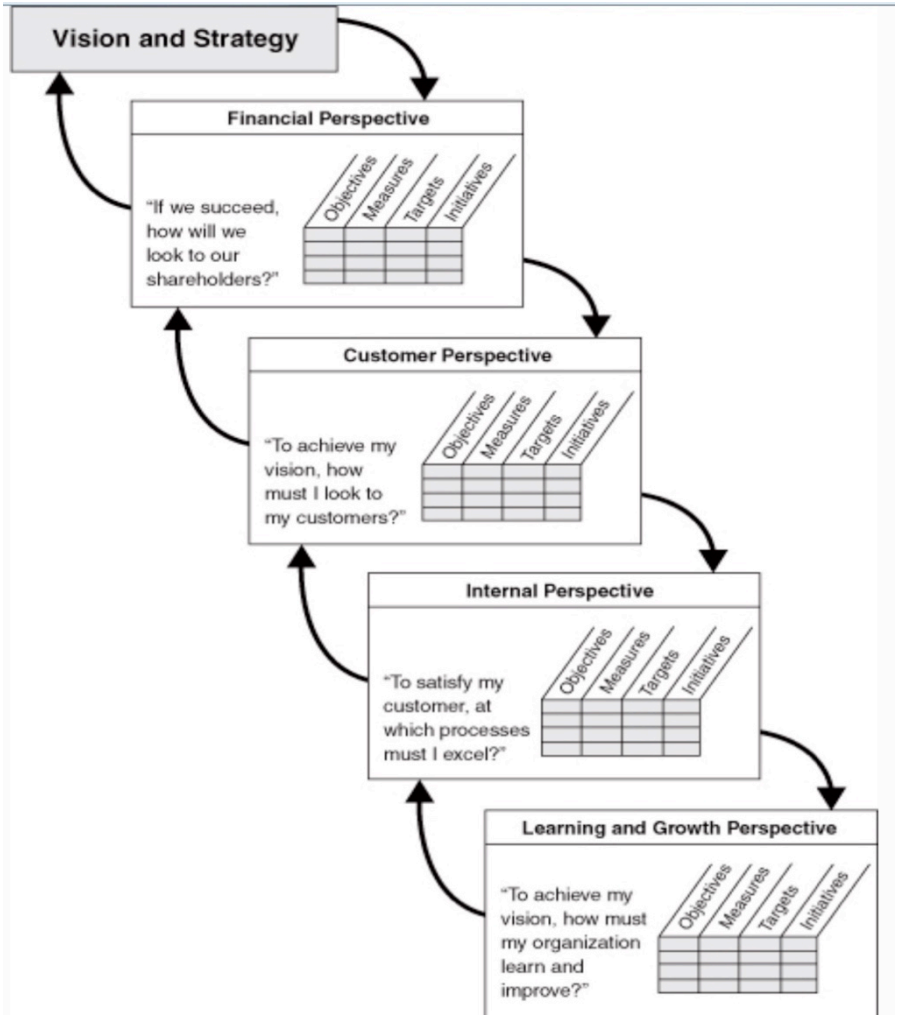

Figure 4: Defining the Cause-and-Effect Relationship of the Strategy

Source: Kaplan and Norton, 2001, Harvard Business Press, p.105.

In order to operationalize a business strategy, Kaplan and Norton maintain that it is imperative to integrate indicators in the four perspectives by determining goals, lagging and leading indicators (1997, p. 28). Lagging indicators are mapped out for the core issues of each perspective and resonate with the business strategy of each business unit represented in the given perspective. Thereby, lagging indicators provide an indication of whether the strategic objectives within a perspective have been met. Compared with the lagging indicators, the leading indicators differ between firms and specify the competitive advantages of a firm, while detailing the measures to achieve the lagging indicators (Figge et al., 2002, p. 271). Kaplan and Norton emphasize that this cause-and-effect relationship of this design is the quintessence of this strategy (Kaplan & Norton, 2001, p. 148). Another core principle of the BSC is the top-down linking of goals and the corresponding measures in the four perspectives, which according to Figge et al. reveals the influence factors exerting the greatest effect on lagging indicators and accordingly also the reaching of the objectives (Figge et al., 2002). While this principle occurs within the perspectives, it is also transposed to the linkage of the perspectives, i.e. the lagging indicators of lower-tier perspectives act as leading indicators within a higher level perspective. To provide the practitioner of the BSC with a frame, they can use generic categories to devise company-specific lagging indicators. Kaplan and Norton provide generic categories that can be employed across industries, as seen in appendix 7.4. In the same way

that lagging indicators can be devised within generic categories, leading indicators can be devised, using a generic framework as well, in spite of customary requirements between manufacturing and service industries; refer to appendix 7.4.

Rationale for the Balanced Scorecard

The Balanced Scorecard (BSC) (Kaplan & Norton, 1992; 2005; 2007), in its original form was created to attain a holistic picture of a company's operations and to move away from business strategies that solely view a company's health and performance from the vantage point of financial performance measurements, as a sole indicator. According to Cymmek and Faßbender-Wynands, the primary intention behind the development of the BSC was aimed at improving the indicator numbers relating to the controlling of a company, but was soon recognized for its potential in the sphere of strategic management (2001, p. 18).

The main critique of incumbent indicator systems—merely relying on financial indicators to tell the story of a company's performance— can be traced back to their orientation towards the past, a disparate view of the company and the lack of flexibility (2001, p. 18). Particularly, the point that incumbent indicators are oftentimes disassociated from the rest of a company's operations, has also been highlighted by Karina Funk. Although she is aware of the shortcomings of leading indicator identification, she asserts that even imperfect performance measurement is still better than measurements that are disconnected from business objectives (Funk, 2003). Funk also stresses the point that, only by having financial and intangible performance information available and the ability to take action can managers identify performance priorities for the company in the long run (2003, p. 69). In the same way, Kaplan and Norton see its creation as a response to the problem of *short-termism* and past orientation in management accounting (1992). To this end, Kaplan and Norton argue that the diverse complexities a company faces, cannot merely be viewed from the financial perspective, but require the view from multiple vantage points (Kaplan and Norton, 1992; 2005). Similarly, by adding non-monetary aspects, the Balanced Scorecard represents a departure from the conventional notions of indicator sets, giving way to what the literature hitherto designated as "performance measurement"[19] (Cymmek & Faßbender-Wynands, 2001, p. 17).

The case for the BSC was made in light of the observation that the efficient use of investor capital is no longer the leading factor in gauging a company's competitive advantage, but rather soft factors such as good customer service, intellectual property and knowledge creation, that are now given more attention (Figge et al., 2002). As stated by Cymmek and Faßbender-Weynands, the main function and possibly decisive argument for employing the Balanced Scorecard is its ability to map out an organization's vision and strategies on all levels of operation of a company, by outlining coherently to all members of staff goals and measures within the different perspectives (2001, p. 18).

Although the power of the BSC can be demonstrated with ample examples, Kaplan and Norton delineate its persuasive cause-and-effect relationship by looking at a chemical company which successfully added value through using the concepts of the BSC (2005, p. 179). In this example, a department manager estimated the daily value of output within the production process by deducting the price of raw materials and miscellaneous other expenses from the market price. The daily financial report he issued, gave employees insightful feedback and motivation, resulting in increased productivity and quality. In spite of conflicting goals, like reduction of energy consumption, increased throughput and simultaneously increasing quality, the financial statements provided guidance on the priority of trade-offs. As a

[19] See also Robert S Kaplan and David P Norton (1992; 2004; 2007; 2005). According to Neely, the term signifies a situation, where measurement is used for quantification and action yields performance (2005, p. 1228).

consequence, operational processes, such as the instant repair of noncritical components during the night shift, instead of discovery of the non-operational component the next morning, improved. To keep employees motivated and performing quality work, the manager tightened parameters for in-spec production, and reset the price to reflect a premium of 25% for output containing minor impurities. It is maintained that the success of the manager's daily financial reports was premised on the realization of what had previously been classified as intangible. This positively affected operational processes and improved return on investment (ROI).

The trend towards overall performance measurement and implicitly towards the Balanced Scorecard, for reasons of competitive advantage through consideration of non-financial factors, is exemplified by multiple studies of sectors and companies (Adams & Frost, 2008; Dias-Sardinha & Reijnders, 2001; De Meyer 1992; Neely, Mills, Platts, Gregory, & Richards, 1996).

3.4 The Sustainability Balanced Scorecard

This section seeks to review the literature on the practical application of the BSC as an analytical tool to assess companies' integration of value-adding sustainability aspects. Although, much has been written on how companies and industries have employed the Balance Scorecard internally, there are very few studies that have in fact illustrated variants of the BSC as an analytical tool for researchers interested in corporate sustainability performance. Its multipurpose application is probably best captured by the Cymmek & Faßbender-Wynand's statement that the four perspectives "should only be used as a pattern not as a straitjacket when employed in a company", and can thus be enhanced by additional perspectives, depending on the individual corporate strategy of a company (2001, p. 21). In a similar vein, Kaplan and Norton did not only view the BSC as a performance measurement tool but also as a full-out management system, that can be deployed in managing customers, driving performance and in the aligning of myriad internal strategies relevant to employees, research and development and operations. Accordingly, it does not come as a surprise that an array of authors have also endorsed its use in assessing environmental and social performance of companies (Bennett & James, 1998; Bieker & Waxenberger, 2002; Epstein & Wisner, 2001; Figge et al., 2002).

The employment of a variant of the themed BSC in the context of sustainable companies sourcing from the Amazon is unprecedented, but the author is of the opinion that the SBC is an invaluable tool in understanding opportunities and obstacles in making companies with a sustainability vision in the Amazon more profitable. This provides an alternative to short-sighted and destructive business models in the Amazon Rainforest.

3.4.1 Considerations for the practical employment of the sustainability balanced scorecard as an analytical tool

The literature landscape on the practical application of the themed balanced scorecard as an analytical tool for researchers of corporate sustainability is scarce, which can be attributed to the fact that the BSC, in the context of environmental assessment and performance of a company, as a standalone tool, is difficult to implement, delivering subjective and oftentimes anecdotal information at best (Dias-Sardinha & Reijnders, 2005; Hass 1996; Mauser 2001). While the BSC proves very useful in exemplifying context-specific measurements, performance achievements, initiatives and objectives, it is not illustrative in terms of classification of management characteristics and designation of performance indicators (Dias-Sardinha & Reijnders, 2005; Mauser 2001). To address these shortcomings of the BSC under

these circumstance Dias-Sardinha & Reijnders (2005) have devised the Performance Framework that provides leeway to capture the specific factors of a company using the BSC, while enabling guidance on performance references and standardized classification of a company's overall sustainability strategy.

An important contribution to the field of the context-specific application of the BSC has been made by Kang et al. (2015), who examined the benefits of CSR on small and medium sized accommodations (SMAEs) in Phuket, Thailand, employing the Sustainability Balanced Scorecard proposed by Figge et al. Similar to Figge et. al., they propose supplementing the BSC with a non-market perspective that incorporates strategically relevant aspects from the environmental and social domain. Additionally, however, Figge et al. (2002) propose two additional adaptations of the BSC in the context of sustainability. These are comprised of the auxiliary perspectives of integrating the environmental and social aspects into the four perspectives, or alternatively, deducing an environmental and social scorecard, whereby the latter cannot be developed in parallel to the two previous alternatives, but rather needs to be seen as an extension thereof. (2002, pp. 275-276).

Kang et al. address two issues that are particularly relevant in the context of this thesis, namely how CSR affects SMAEs in developing countries and second, the extrapolation of the theoretical hypothesis, underlying the SBSC by Figge et al., to a specified context as an analytical tool (2015, p. 125).

4 Company case studies

Chapter 4 is intended to answer *research questions 1a* and *b* with a view to the individual companies. The questions will be answered by employing the elements of the Performance Framework and using data attained through literature, interviews with authoritative company representatives[20] and a corresponding follow-up questionnaire to solidify the findings from the interviews.

4.1 Natura

4.1.1 Company context identification and description

Natura's company profile and context

Headquartered in Cajamar, São Paulo and founded in 1969, Natura is Brazil's largest company in the domain of cosmetics, fragrances and toiletries. The company boasts a portfolio consisting of 600 beauty products for men and women, including fragrances, makeup, skin cleansers, sunscreen, shampoos, conditioners, and moisturizers. Its main lines are Natura Chronos, Ekos, Tododia, and Una (*Natura Cosméticos S/A. | Company Profile from Hoover's* n.d.). The company is strongly represented, with the majority of its 6,655 employees located in Latin America, first and foremost in Argentina, Colombia, Peru, Chile and Mexico. The cosmetics company also entertains a business unit in France and since 2012, has expanded its sphere of influence to Oceania, by acquiring Australian cosmetics producer Aesop.

Natura finished the fiscal year 2014 with annual net sales of USD 2.76 billion, a growth of 7.06% compared to the previous year and a market valuation of USD 3.56 billion, which alludes to a financially sound operation (*Natura Cosméticos S/A. | Company Profile from Hoover's* n.d.). Since 1970, the company relies on 1.7 million Natura Consultants (NC)[21], principally in Brazil but also in its other markets, to convey the company's value proposition to its customers, using direct sales. Natura's credo *bem ester bem* (Wellbeing, being well), while *wellbeing* "is the harmonious relationship of the individual with himself, with his own body" and *being well* suggests "the empathetic, successful and pleasurable relationship of an individual with other people, with nature, and with the whole" (*2014 Annual Report* 2014, p. 2). The latter stresses the company's emphasis on not only creating economic value for its shareholders, but also social and environmental value by means of its relationship network. Through the company's direct selling model, brand power and product portfolio, the company strives to leverage its sphere of influence to change its various stakeholders' behaviour and habits towards sustainability, including customers, suppliers and its consultants (*2014 Annual Report* 2014, p. 7). The company's efforts towards creating triple-bottom-line value have been rewarded with the issuance of the B Corp[22] certification. This in turn has enabled Natura to become the largest company in the world to receive this award (*2014 Annual Report* 2014). Natura is also a staunch advocate of integrity and maximum transparency, which the company demonstrates, with its adoption of the internationally recognized Global Reporting Initiative (GRI), its initial GRI report being published in 2001. In order to standardize its integration of

[20] For a complete list of interviewees, refer to appendix 7.1

[21] Natura's equivalent of a sales representative

[22] The movement was born in the United States in 2006, led by the non-profit organization B Lab. Today, it consists of around 1,200 organisations in 38 countries. In Brazil, some 30 companies have joined the movement.

environmental principles into its business model, the company also temporarily adopted ISO 14001 in 2004 ("Pense Impacto Positivo Visão De Sustentabilitade 2050," 2014).

In regard to Natura's value chain, there are numerous examples that illustrate its commitment towards mitigating the negative impacts of its operations, while going well beyond other incumbent competitors. For example, the company has invested 3% of its revenue, amounting to R$ 216 million in innovation and development, which has heavily focused on reducing greenhouse gas emissions (GHG) and waste in its products, already during the design phase. Other initiatives, include creation and selection of programmes for the company's suppliers, based on positive social and environmental impacts; life-cycle carbon accounting; benefit sharing with communities. Also noteworthy are Natura's *Believing is Seeing* non-cosmetic products, administered through the NGO Instituto Natura and voluntarily sold through NCs, that contribute to the funding of educational programmes, some of which have been recognized within public education policy by Brazil's ministry of education (*2014 Annual Report* 2014; "Pense Impacto Positivo Visão De Sustentabilitade 2050," 2014).

Designation and description of on-site operations in the Amazon

An important indication of Natura's operations in the Amazon, is the company's turnover from products containing ingredients from the Pan-Amazon region, which, since the base year 2010, amounted to R$ 582.1 million in 2014. This represents 54% of the company's goal of R$ 1 billion in turnover by 2020 (Pense Impacto Positivo Visão De Sustentabilitade 2050, 2014, p. 41). Representative of Natura's operations in the Amazon is its Amazônia Program, launched in 2011, premised on three pillars, namely 1) science, technology and innovation, 2) sustainable product chains and 3) institutional reinforcement. The first point manifests itself in the establishment of the Natura Amazon Innovation Center (NINA) in Manaus in 2012, which is aimed at fostering innovation through science, technology and biodiversity and concomitantly attracting national and international NGOs, universities and start-ups ("Pense Impacto Positivo Visão De Sustentabilitade 2050," 2014). The conception of the center is predicated on the notion that the Amazon holds great potential for innovation and that Natura is a strong player in the region.

Nevertheless, in order to address some of the worst indicators in terms of health, environment and below-par education, the company needs to collaborate with other players to unleash this innovation (personal communication, Iguatemi Costa, August 7, 2015). This also encompasses the company's collaboration with other companies that operate in the region, yet are too small to deal with various political and socio-economic problems that the Amazon region faces (personal communication, Iguatemi Costa, August 7, 2015). For this purpose, additionally to NINA, the B Corp company constructed Ecoparque de Benevides in 2014, an industrial complex aimed at attracting like-minded partners. Jointly, with other akin companies and organizations, the company advocates the development of Brazil's biodiversity regulatory framework, governing the access to genetic heritage and traditional knowledge, while championing amendment to legislation, in order to reduce bureaucracy that is still hampering the country's social biodiversity, technological innovation and the better distribution of wealth ("Pense Impacto Positivo Visão De Sustentabilitade 2050," 2014, p. 73). Iguatemi Costa maintains that the idea was to curb the brain drain that is adversely affecting the region, i.e. most research and development, relevant to the Amazon, is happening outside of Brazil (personal communication, August 7, 2015).

Natura's operations in the Amazon region are a key component of the company, as the Amazon delivers active ingredients, from sources such as cashews, cupuaçu, buriti, pitanga (Brazilian cherry), and passion fruit, to make bars of soaps and body butters for instance. Up until 2013, the company had obtained 48 ingredients from local communities for the purpose of research and development. Currently, the value generated from products that contain

ingredients from the Pan-Amazonian region amounts to 13% and is predicted to reach 30% by 2020. Attributed to the fact that the infrastructure in the Amazon constitutes a great challenge at large to many companies in attaining their ingredients, including Natura, the company pursues means of strengthening the development of agro-extractivist communities. Apart from supporting these communities by purchasing ingredients from the region and ensuring that the benefits from access to genetic heritage and traditional knowledge accrue to the communities, the company has invested R$ 62 million since 2004 towards building infrastructure, studies and technical services and training ("Pense Impacto Positivo Visão De Sustentabilitade 2050," 2014, p. 65). The company classifies these actions as *social biodiversity*[23], on which it premises its business model. This is also in step with the government's socio-biodiversity plan in regions that are subject to high rates of deforestation, emphasising extraction reserves (RESEX) (*Amazon Fund Activity Report 2014* n.d., p. 21).

One product line in particular, showcases the company's commitment towards expanding its portfolio of Amazon-derived ingredients, namely the company's Ekos line containing mainly ingredients from the Amazon. In 2014, the company launched its Ekos 100% Amazônia soaps, increasing the company's total share of ingredients derived from the Amazon, while concentrating on more production steps in the region. The concentration of manufacturing steps in the region was achieved through the state-of-the-art Ecoparque industrial complex, housing the Natura soap plant in Benevides, Pará, in 2014. Thereby, the sustainably harvested oils derived from açai berries, murumuru palm, andiroba etc., are added during the noodle[24] manufacturing process along with other active ingredients, blended, extruded, stamped and finalized in Ecoparque, all of which happens on site before being distributed by third-party transport companies (*2014 Annual Report* 2014, pp. 26.)

In order to strengthen socio-economic development governance in the region the company has established four goals:

strengthening local leadership;

strengthening both civil society and public authorities;

the joint development of collective measures;

support for the development and implementation of public policies.

4.1.2 Characterization of company's objectives

4.1.3 Performance objectives and references

Natura showcases an all-encompassing commitment to the six performance objectives and a partial commitment to the related performance references, as seen in table 3. These results are a testimony to the company's size and international presence that advises fundamental compliance with well-established certification schemes, e.g. ISO 14001 and GRI—both of which the company possesses—for credibility purposes and market access. For a company like Natura, these standards are of upmost importance, as they provide the legitimacy to

[23] The term social biodiversity, according to the company is an evolution of the term biodiversity. The term not only signifies the company's goods and services it derives from natural resources, but also the value of traditional knowledge gained through local communities and the development of local production chains using genetic heritage ("Pense Impacto Positivo Visão De Sustentabilitade 2050," 2014).

[24] Dry soap mass that has the shape of a noodle.

operate internationally and ensure comparability with international companies. Attributed to the size of the company, national and regional policy, especially relating to its presence in the Amazon, has a huge bearing on its operations, as the company engages with many politically relevant spheres, such as the Forest Code; social legislation, including education biodiversity and technological innovation. Accordingly, compliance is not only important to avoid confrontation with the law but is also crucial for the infrastructure of its business.

The other vantage point for this result, is attributable to Natura's founders Antonio L. da C. Seabra, Guilherme P. Leal, Pedro L. B. Passos that—although not responsible for day-to-day operations—still uphold the original ideas of the company in their function as controllers. Given the fact that they hold the greatest number of shares in the company and act as counsellors, they still have the ability to fire CEOs or other key figures, not in compliance with their values. Passos, the last of the three to enter the company 40 years ago and Seabra, the initial founder of the company, have an almost "religious way" of thinking of processes related to the Amazon and connection of things at large, which still guides processes like innovation, collaboration with various actors and the way things are sold. These values, including its sales philosophy, to sell directly through relationships, percolate through every echelon of the company and still resonate with Leal and Seabra principles today (personal communication, Iguatemi Costa, August 7, 2015). Accordingly, environmental and social aspects are not dealt with separately, but are part of the company's DNA. For instance, the company's managers are not simply evaluated based on their contribution to financial value, but also on their decision-making in the triple-bottom-line sense, e.g. if a manager made a decision that increased CO_2 emissions, this would affect his salary (personal communication, Iguatemi Costa, August 7, 2015).

Table 3: Performance objective and reference profile of Natura

Strategic Objectives	**Performance References**
Pollution control/ Regulatory compliance:	No violations of regulations, voluntary agreements, and general codes of conduct voluntarily adhered to. Violations include both substantive and procedural environmental matters, such as having an adequate monitoring and/or an environmental management system (EMS)
Pollution Prevention:	Procedural: effective management structure for pollution prevention, preferably following standards related to an EMS, with effective monitoring and information systems
Eco-Efficiency:	Value creation coupled with continual improvement Procedural: following standards related to an EMS
Eco-Innovation:	Procedural: accountability for life-cycle impacts of products/services, preferably following standards related to life-cycle analysis (LCA) and eco-labelling

(Eco)-Ethics:	Specified principles (e.g. zero discharge, zero waste, use of only renewable energy) or general environmental decision-making based on ethical concerns Procedural: applying ethical requirements, preferably use of voluntary standards as guidelines, e.g. AA 1000 (AccountAbility, 1999), SA 8000 (SAI, 2000) Reporting, preferably applying Sustainability Reporting Guidelines requirements (GRI, 2000)
Sustainability:	Procedural: compliance with all pre-referenced standards. Integrated management of environmental, social, and economic aspects of triple bottom line by using an integrated management system (e.g. SIGMA Project, BSI, 2001). Involvement of and transparency to third parties (e.g. apply GRI, 2000)

Pollution control/ Regulatory compliance

More generally, the company showcases full adherence to this objective, as it not only is fully in compliance with relevant national and local regulations, but until recently, also employed an environmental strategy pursuant to ISO 14001. In accordance with its EMS, the company monitors solid waste, carbon emissions, and puts forwards commitments and strategies to address these. Liaising with public policy makers, particularly in the sphere of genetic heritage and conservation of biodiversity, is a cornerstone of its operations in the Amazon. Its compliance with relevant laws and EMS, is supplemented with a voluntary subscription to GRI reporting principles ("Pense Impacto Positivo Visão De Sustentabilitade 2050," 2014, p. 7).

Pollution Prevention:

Pollution prevention is an important objective that is very descriptive of Natura's strategies, which the company articulates through its reference, effective management structure for pollution prevention, preferably following standards related to an EMS, with effective monitoring and information systems. Noteworthy is that the company already accounts for the GHGs and waste impacts before a product is designed. This is done by employing Environmental and Social Profit and Loss (ESP&L) accounting in its innovation and product development departments, whereby the company puts a monetary value on the positive and negative impacts of its products, along the value chain, i.e. from the production, until the delivery of the product to its salesforce (personal communication, Iguatemi Costa, August 7, 2015).This makes impacts visible to its various stakeholders (2014 Annual Report 2014, p. 28). Pertaining to pollution prevention the company prioritises two areas, namely solid waste and carbon emissions, measuring changes, using 2012 as the base year. Two indicators are used to measure emissions, scilicet relative GHG emissions[25] and absolute GHG emissions of Natura. According to Iguatemi Costa, the company is intent on going well beyond current carbon neutrality, which it has achieved hitherto through purchasing of carbon credits tied to projects in the Pan-Amazon region ("Pense Impacto Positivo Visão De Sustentabilitade 2050," 2014, p. 35). The company aspires to reduce GHGs by 33% by 2020, relative to its base year 2012. To illustrate its progress on aspects relating to the environment and other areas, like

[25] kg of CO_2 / kg of product invoiced

stakeholders and management, the company employs status diagrams that denote four statuses, i.e. not initiated, at planning stage, underway and stage of completion. These can be found under appendix 7.6.1, including other criteria.

Eco-Efficiency

Eco-efficiency is explicitly conveyed by Natura as a leading objective through value creation, coupled with continual improvement, following an EMS. The company specified an eco-efficient packaging indicator within its solid waste category, dictating a 50% weight reduction, compared to regular/similar packaging and at least 50% post-consumer recycled (PCR) material and, or alternatively employing renewable material in the production ("Pense Impacto Positivo Visão De Sustentabilitade 2050," 2014, p. 83). Eco-efficiency is furthermore driven by the company's conscious consumption initiative (SOU) that encourages consumers not only to look out for sensory and technical quality of Natura products, but also towards smarter consumption ("Pense Impacto Positivo Visão De Sustentabilitade 2050," 2014). Better awareness on the part of the customers, enhances the accountability of Natura to continue innovating towards minimising the resource intensity and socio-environmental impacts of its products.

Eco-efficiency is evident in the Ekos line, containing products, largely sourced from the Amazon region. With the recent inception in 2014 of refills for the Natura Ekos Frescores (fragrances), Natura was able to use 100% recycled post-consumer material (PCR), reducing GHGs by 72%. Overall, this policy is to enhance PCR for the entire portfolio of the company by 10% by the year 2020 (2014 Annual Report 2014, p. 28). The share of PCR in products sold has decreased from 1.6 to 1.2% between 2012 and 2014, but these fluctuations are attributable to fewer sales of products in this category or inversely, more sales of products without PCR materials. The share of eco-efficient packaging, however, rose from 22% to 29% from 2013 to 2014. Costa contends that the packaging point still constitutes a huge challenge for the company, largely due to its direct selling model, making it difficult to collect their packaging from the consumers. The company is currently working on reverse logistics models, employing already existent garbage-collecting cooperatives, but according to Costa the company is dealing with very complex socio-economic problems that have the potential to be amplified by the company's interference (personal communication, August 7, 2015).

Eco-Innovation

Natura also aligns with the objective of eco-innovation, which particularly manifests itself in *accountability for life-cycle impacts of products, following standards related to life-cycle analysis (LCA) and eco-labelling*. Innovation, along with science and technology is the first pillar of Natura's operations, which the company's innovation hub in New York, the Amazon Innovation Center and the recent addition of the Ecoparque in Benevides are indicative of. As part of the Amazônia Program, the latter institutions innovate with product-related life cycle impacts in mind, while harnessing the biodiversity potential of the Amazon region. ("Pense Impacto Positivo Visão De Sustentabilitade 2050," 2014). Three percent of the company's annual revenue was largely invested into innovation relating to eco-effectiveness and eco-design. Consistent with this, it is the conviction of Gerson Pinto, Vice President of innovation that eco-design and eco-effectiveness need to be the spearhead of development, affecting the entire value chain (*2014 Annual Report* 2014, p. 14). In this vein, Natura's whole business model operates according to a lifecycle perspective (LCP) — not only from the vantage point of emissions or solid waste, but also by delineating the financial and social impacts of its actions. The company accomplishes this by detailing the resources, i.e. "our resources"; actions and initiatives, i.e. "how we transform", and finally the corresponding deliverables or anticipated results, i.e. "what we deliver", complemented by CO_2 emissions throughout the

typical life cycle of a product, from conception to consumption. While looking at impact reduction throughout its lifecycle, the company, also looks at making processes more efficient. This is illustrative of a lifecycle perspective, incorporating aspects falling into the tripartite categories of the triple bottom line.

As an example of LC innovation, the input step in its resource section portrays the relationship of a number of families, supplying products and the percentage of Natura's total ingredient input acquired from the Amazon region. In the transformation step the company illustrates what actions it is taking to incur positive benefits for a number of stakeholders within deliveries, e.g. sharing benefits with communities and researching renewable resources for its inputs in formulas and packaging. Corresponding with this, the deliveries section conveys the beneficial impact, expressed in financial or non-financial terms, e.g. amount invested in the Amazon region going towards environmental, social and economic development. This section is augmented by total carbon emissions related to the extraction of raw materials and other inputs (2014 Annual Report 2014, p. 11).

(Eco)-Ethics

The company's strategies and actions also demonstrate a strong commitment to the objective (eco)-ethics, which it articulates through a set of core values and principles put forward by the company's founders, but also through the use of widely recognized voluntary principles and reporting. At the foundation of Natura's principles is its report *2050 Sustainability Vision*, and its awareness of the role Natura can and has to play in promoting social and environmental wellbeing through value creation for all its stakeholders. Pursuant to the notion of "walk the talk", the company's normative views are captured in the independent B Corp certification that recognizes companies whose actions build a better world, using normed parameters (Natura | B Corporation n.d.). This manifests itself in the company's relationship network, entailing suppliers from the Amazon and other parts of South America, NCs and customers, instrumental in maximizing the positive impact the company has along and beyond its value chain. According to Costa, the company is well positioned to assert strong leverage on its supply chain, first and foremost because its suppliers rely on Natura as their main buyer (personal communication, August 7, 2015). In response to a contentious regulatory problem, namely intellectual property rights in the Amazon, the company has created agreements with its 2,500 small suppliers. It ensures that the company will "refrain from the unethical commercialization of the region's heritage and cultural heritage", i.e. biopiracy (Natura Commits to Sourcing Sustainably from Amazon | Guardian Sustainable Business | the Guardian n.d.).

On the normative side, the company is also committed to the principle of zero waste, which Natura aspires to achieve through multiple departure points, within its own plants, pressure on distribution through accurate planning within its logistics, innovative solutions for marketing, packaging and the final delivery of products ("Pense Impacto Positivo Visão De Sustentabilitade 2050," 2014, p. 45). In order to convey transparency and ethics resoundingly, particularly to its stakeholders as part of their value proposition, companies like Natura have focused on the use of informative labels, indicating their commitment to trustworthiness[27]. The company has gone to great lengths to create accountability and transparency, in part by devising an environmental table for its natural oils, especially highlighted by the Ekos brand,

[27] Labelling can also be classified as a performance reference under eco-innovation, attributable to the fact that it can also be found under Product Life Cycle. The author has, however, chosen to include it in this section because it gives the consumer an oversight over socio-environmental impacts of a product, which can be seen as transparency, an ethical virtue.

detailing percentage of natural ingredients in the formula, whether raw materials used are certified by origin, recyclability of packaging, percentage of recycled materials and recommended refills, available under appendix 7.6.1. As of 2007, however, all products of Natura have been required to carry this label (Brouwer 2007, p. 54). While the company was devising its current sustainability vision, it realized that labels on its packaging no longer reflected the company's progress relating to sustainability matters. Therefore, the company's strategies, relating to ethics in 2015 are geared towards updating information on its packaging to accurately reflect the company's efforts to date.

Overall, Natura holds well recognized management certifications relating to an ethical demeanour at the corporate level, including the Global Reporting Initiative (GRI) for transparent reporting, the Dow Jones Sustainability Index (DJSI) for sustainable investment screening and the B Corp certification. At the product level however, particularly when subject to the complexities of the Amazon, the company prioritises its internal environmental table on internal, rather than international certification schemes like the Rainforest Alliance or the FSC label to highlight ethical behaviour for practical reasons. This problem is showcased by Cooperatives of Extractivist Producers of Rio Iratapuru in Amapá. Only after three years, did the company receive the FSC label for its Brazil nuts contained in some of its creams, which was part of an initial strategy to have all active ingredients of the Ekos line certified. Working with diverse communities with very complex processes all over the Amazon region, the company ultimately revoked its strategy to attain formal certification of all its products (Brouwer, 2007, p. 55).

Sustainability

The company fulfils its commitment to standardized interpretations of sustainability by adhering to all previous objectives and all or individual performance references thereof, complying with the three pillars of sustainability.

In reference to the Amazon however, the company does not consider itself sustainable as exemplified by this quote of former CEO Alessandro Carlucci (2007):

> *We don't think of promoting sustainable development only in the Amazon. We know this will not be a simple and error-free path—and we will certainly not obtain results on our own. It requires persistence, self-criticism and tolerance for errors…we believe that one assurance we can give our consumers is the conjunction of ethical and transparent relationships that we have built over the years with suppliers, the government and other actors involved in an extremely complex process. Therefore, we do not consider our products "sustainable" (p.56).*

4.1.4 Value driver objectives and references

Natura's ESG endeavours, translating into financial value, fall into the three categories *growth, performance and risk management.* While it is only aligned with two of the criteria in growth, Natura's value-adding efforts—with particular focus on its Amazon-related aspects— are dominantly congruent with all mentioned performance references in *performance* and *risk management*.

Table 4: Natura's Value Driver Metrics and Performance References

Value Driver Metrics	Performance References
Growth Revenue growth from sustainability-advantaged products, services and/or strategies (S/G)	**Product and service innovation** Developing innovative sustainability-advantaged products and services that better meet customer needs while minimising unwanted social or environmental consequences and/or enhancing desirable social and environmental outcomes **Long-term strategy** Implementing a long-term strategy and plan, along with the required investments, to deliver sustainability-advantaged growth
Performance Total annual cost savings (and cost avoidance) from sustainability-driven productivity initiatives (S/P)	**Operational efficiency** Operational efficiencies, resulting in cost savings and/or cost avoidance through better use of natural resources, reduced wastes and/or finding better alternative materials with lower costs and impacts **Human capital management** Reducing the cost of attracting and retaining top talent to the firm as a result of the firm's commitment to sustainability and the employees' perceived value of that commitment, as well as increased worker productivity due to skills and safety training, and inclusive and equitable work environments **Reputation pricing power** Margin improvement, potentially increasing price and volumes from customer perception of enhanced value from sustainability–advantaged products.
Risk Management Reduced sustainability-related risk exposure that could materially impair a company's performance (S/R)	**Operational and regulatory risk** Decreasing levels of environmentally critical and/or constrained resource use; limiting business interruptions and risk of losing the license to operate; reducing emissions of key pollutants or toxins; and other areas that could expose the firm to regulatory actions or penalties, as well as increasing adherence to established sustainability-related operating standards, including results of related audits and certifications. **Reputation risk** Increasing assurance via assessments, audits and/or certifications that the firm's suppliers are providing reliable, responsibly produced products and services in accordance with the firm's policies, industry codes and international standards **Supply chain risk** Decreasing exposure to reputational risks arising from a variety of actions including, fines, negative legal judgments, boycotts, public protests and/or negative media attention through implementation of proactive policy and procedures that limit the risk of social and environmental harm. **Leadership and adaptability**

Growth - Product and service innovation

In the sphere of *growth from sustainability-advantaged products and services*, the company takes advantage of product and service innovation to minimise environmental consequences and enhance social and environmental benefits. Natura's "reason for Being is to create and sell products and services that promote wellbeing/being well" (*2014 Annual Report* 2014, p. 11). Natura's innovation processes are largely driven by the potential for mitigation of socio-

environmental problems and by spearheading new product categories. This is exemplified by its new product launch of the *Ecocompacto* system, across its different products lines, including Todadia. The product was developed in collaboration with its partnering suppliers, using 50% less packaging, reducing the use of aluminium by 15% and lowering GHGs by 48%. Thereby the company was able to dominate the Brazilian aerosol antiperspirant market, providing 22% of the global deodorant volume. This example resonates with Gerson Pinto, VP of Innovation, who maintains that products are developed with eco-design and eco-effectiveness in mind while involving the entire value chain (2014, p. 24).

On one hand, Natura's product strategy encompasses eco-design and eco-effectiveness, alluding to a commitment towards technical and tangible improvements, enabling the company to grow and dominate new segments. On the other hand, the company uses its products as a vehicle for socio-environmental change, demonstrated by the Ekos sub-brand. The business model's main component is to push for the inclusion of agro-extractivist communities in the Amazon, by internalizing genetic heritage and the concomitant traditional knowledge. Highlighted in the Ekos line are a number of interactions that have the ability to contribute to holistic benefit sharing. These include: giving commercial value to traditional knowledge by combining it with scientific knowledge; structuring value chains by generating economic opportunities with hitherto unapproached communities and increasing the conservation of biodiversity by ensuring that communities extract and cultivate products sustainably, i.e. respect the cycles of nature (Brouwer, 2007). The reach and sales of Natura products thereby foster expansion of communities using sustainable harvesting and extraction techniques. By providing an innovative environmental table containing information on active ingredients, recycled material and recommended refills, the company is also contributing to conscious consumption, as seen in appendix 7.6.1. Together with 57% of Brazilian households consuming Natura products at least once a year, Natura's value chain accrues more economic benefits, which in turn stimulates sustainable development in the Amazon (*2014 Annual Report* 2014, p. 11). Although Natura cannot be a complete solution to the problem, the science and innovation pillar stimulates knowledge in the region, conducive to product innovation and locally produced knowledge.

Growth - Long term strategy

Long-term strategies are an essential objective of Natura's operations in the Amazon to ensure continued expansion of its sustainability-advantaged product portfolio. Hitherto the company is struggling with the retention of people in the Amazon region, making it a very costly matter. Second, pertinent research and innovation is not generated in the region, attributable to lacking science, technology and innovation (S, T& I) infrastructure, relative to other parts of Brazil (personal communication, Iguatemi Costa, August 7, 2015).

At the macro-economic level, this is in line with the call for national policies towards the prioritisation of S, T& I infrastructure. This includes construction of public universities and creation of scientific and technological institutes; the attraction and employment of highly trained personnel; and parallel to this, the radical expansion of post-graduate programmes. This is seen as an indispensable step towards creating economic growth and socio-environmental sustainability, aimed at creating a thriving economy based on a standing forest (*Amazonia Brazilian Challenge of the XXI Century* 2008). Therefore, enshrined in its 2020 targets is the company's investment of R$ 1 billion in the region, including a network of 1000 interdisciplinary researchers, exclusively focused on the Amazon, while expanding its local extractivist workforce to include up to 12,000 suppliers, operating according to Natura's sustainability guidelines (*Natura Commits to Sourcing Sustainably from Amazon | Guardian Sustainable Business | the Guardian* n.d.). This feeds into another thread of the company, namely to invest in education and entrepreneurship to create local Amazonian business leaders because according to former CEO of Natura Alessandro Carlucci, local leadership in

communities is conducive to development and ultimately growth. Concurrently, the company invests in local production chains, so business opportunities are interesting enough for gifted and educated people to remain in the region, combatting workforce attrition (*Natura Commits to Sourcing Sustainably From Amazon | Guardian Sustainable Business | the Guardian* n.d.).

Conscientious of the long term, one of Natura's main priorities has been to establish a state-of-the-art science and innovation incubator, NINA in Manaus, in order to retain and expand its scientific workforce and to produce local innovation. The company is insistent that non-competitive knowledge is shared with everyone.

Performance - Operational efficiency

Operational inefficiency in the Amazon constitutes a core challenge for Natura and akin companies, adversely affecting cost structure of the company, leading to slower progress in increasing the harvest of local raw materials and ultimately less socio-environmental benefits to the region. Sourcing material from the Amazon is neither an effortless nor cost efficient option under conventional circumstances, which has various reasons. Natura's main concerns revolve around information, yield-increasing technologies, and transport logistics (personal communication, Iguatemi Costa, August 7, 2015). Internet in many parts of the Amazon is scarce or extremely slow, which is also echoed in the Brazilian Academy of Science's call for internet with a minimum bandwidth of 2 Gbps (*Amazonia Brazilian Challenge of the XXI Century* 2008, p. 18).

In a similar vein, ingredients are largely still handpicked and manually dried, i.e. nothing has changed in centuries, calling for new or available yield-increasing technologies (personal communication, Iguatemi Costa, August 7, 2015). Transport logistics, also constitute a huge challenge, as huge distances need to be covered by boat on tributaries of the Amazon River for different steps in the production chain. An exemplary issue along these lines is the verification of the quality of extracted essential oils at the beginning of a process, but due to lacking on-site infrastructure this is not possible until it reaches the factory (personal communication, Iguatemi Costa, August 7, 2015). The goal is to increase the company's purchasing power in the region, while respecting the natural production cycles of nature, which is only possible by eliminating inefficiencies in the value chain. The company has started to address this issue by strategic placement of infrastructure.

Under the auspices of the Amazônia Program, the company invested money into a multi-million-dollar soap factory—Ecoparque—that opened in 2014 in Benevides, Pará with the goal of streamlining processes and enabling its suppliers to also take up manufacturing activities in its factory. This enables Natura to have the entire saponification process of the Ekos line occur in the Amazon under the supervision of the company, which previously had been manufactured by third-party producer in Minas Gerais and São Paulo (*2014 Annual Report* 2014). By internalising these processes, the company's costs for sustainable sourcing from the Amazon are covered, while more value remains in the region. Also, the company's extractivist suppliers benefit from this move because the company covers the majority of their up-front costs and simultaneously teaches them sustainable techniques (*Natura Commits to Sourcing Sustainably from Amazon | Guardian Sustainable Business | the Guardian* n.d.).

Performance - Human capital management

Human capital assumes an important role in Natura's corporate strategy, manifesting itself in the company's focus on relationship management, which the company employs to achieve its ends in the sphere of economic, environmental and social value. The company's fundamental belief is that relationship constitutes the linkage with everything in the universe (*2014 Annual*

Report 2014, p. 2). Therefore, it is not only employees that the company accounts for in its human capital management, it also greatly depends on its suppliers, Natura Consultants (NCs), Natura Consultant Advisors (NCA) and consumers nationally and internationally, as it is a reciprocal system with a top-down, bottom- up approach, engaging all tiers in its business model, premised on sustainability.

Essentially stakeholders are seen as purveyors of change and strategic assets in furthering the integration of sustainability in the company's business model. Therefore, the company also keeps track of the *quality of its relationships* with designated stakeholder groups, illustrated in table 5. In reviewing the quality of relationships, relevant to its Amazon operations, based on concepts such as social-biodiversity and eco-efficiency, it becomes apparent that relevant stakeholders respond favourably to the company's actions. *Climate survey – Employee favourability* exhibits a positive trend between the years 2011-2013, with an observed slump in 2014, down from 78, the highest value since recording this indicator, in the previous year. Brazilian suppliers, chiefly located in the Amazon, have also been responding positively, with a value of 30 in 2013, the highest yet in the time frame from 2011 to 2013.

A further factor underlining the relevance of these numbers is the company's consistency in increasing the wealth of its internal stakeholders, e.g. employees and suppliers, irrespective of the company's overall financial performance, demonstrated by the annual numbers under *Distribution of wealth (R$ millions) in* table 5. This is another way that the company nourishes its relationships, i.e. human capital. Although Natura undertakes isolated initiatives to retain and expand its network of stakeholders, it is the empowerment and engagement that individual groups value in helping to shape and promote the company's sustainability agenda.

Two initiatives backing this claim, are the implementation of an ombudsman service and the conception of a materiality matrix in 2007. The ombudsman service, the communication channel of Natura, enables employees, residents, third-parties nationally and internationally, suppliers and supplier communities in the Amazon to voice concerns, make inquiries, report breaches of conduct, and praise the company. The latter, i.e. the definition of materiality, makes external stakeholders, such as specialists, press and NGOs, in addition to company-internal stakeholders, instrumental in the conception of the company's *Sustainability Vision 2050*. Thus, the stakeholders are continuously engaged in designating material themes, including climate change, water, biodiversity and education, all of which are themes resoundingly present in its Amazon operations.

Parts of the Amâzonia Program exemplify how the company has been able to build rapport with its suppliers in the Amazon and thereby forge sustainable relationships. Through its infrastructure project, the modern Ecoparque complex—housing its new soap factory for its Ekos 100% Amazonia Soap— and its policy for the use of social biodiversity, the company has been able to advance its relations with supplier communities further. ("Pense Impacto Positivo Visão De Sustentabilitade 2050," 2014, p. 43). As a result, more local, sustainably harvested ingredients are added, production steps previously undertaken by third parties in Minas Gerais and São Paulo were internalized, benefiting local supplier communities, and customers receive a product that brings them even closer to the natural Amazon image they expect from the brand (*2014 Annual Report* 2014, p. 26).

As for the employees, Costa maintains that HR costs are very low, in part because of employees' and the board's mutual enthusiasm for socio-environmental measures, which makes Natura a desirable employer (personal communication, August 7, 2015). In Colombia, the company has also been formerly recognized for being the best employer to work for in 2014 (*2014 Annual Report* 2014, p. 13). This is best captured in the company guidelines, positing that "all our employees will comprehend and incorporate the concepts and directives

of sustainability, understanding them as a distinct differential that adds value and drives innovation, in addition to ensuring business continuity" ("Pense Impacto Positivo Visão De Sustentabilitade 2050," 2014, p. 71).

Quality of Relationships[28]	**2011**	**2012**	**2013**	**2014**
Climate survey – Employee favourability	70	72	78	75
Supplier loyalty Brazil	27	23	30	
Distribution of wealth (R$ millions)	**2011**	**2012**	**2013**	**2014**
Employees internationally		803	917	1.010
Suppliers internationally		4.837	5.425	5.989

Table 5: Quality of relationships and distribution of wealth (R$ millions)

Source: 2014 Annual Report. (2014). São Paulo: Natura

Performance - Reputation pricing power

Natura, which has been named Brazil's seventh most valuable brand and Latin America's most valuable retail brand, illustrates how the interaction of high quality products, consistent profitability and a strong attention to socio-environmental aspects, solidifies *reputation pricing power* over time (*2014 Annual Report* 2014; *Sustainable Innovation - Interbrand* n.d.). Natura's Ekos line is the prism through which many consumers forge their brand identity with Natura, equating its products with the pristine Amazon Rainforest, biodiversity and exotic, sustainably, harvested ingredients that are beneficial to good health. Costa, gives substance to this claim with an example: "when the company launches a product line, containing strawberry and grape extracts, not typically part of Brazilian biodiversity, in people's imagination, it is still the Amazonian farmer, who harvests these ingredients" (personal communication, August 7, 2015).

Consumer loyalty numbers in 2014, as seen in Table 6, attest to the strong appeal that the brand holds. Although national and international loyalty numbers show slumps in the high forties to low fifties in 2012-2013 down from 66 in Brazil during the year 2011, the brand finishes strong with numbers in the mid-sixties in 2014. However, the company does not just want to use customers' perception as a façade and use sustainability as a buzzword that has been overexploited by companies around the world. Instead the company uses social biodiversity inputs, as a key pillar to its operations in the Amazon, guaranteeing benefit sharing with supplier communities. Under the auspices of its Ekos sub-brand, Natura also seeks to promote sustainable business practices in collaboration with other organisations, while pressuring legislators to pave the way for sustainable business to take place on a greater scale in the Amazon (*2014 Annual Report* 2014, p. 15). The Ekos brand is not only the main sub-brand in terms of positioning and an accumulated business volume of R$ 582 million since 2010, but also the sub-brand yielding the most innovative measures and initiatives, improving the triple-bottom-line impact further. This is exemplified by the refills for the Natura *Frescores* line, made from 100% recycled post-consumer PET containers and reducing the carbon footprint by 72%. This resulted in Natura becoming a first mover to use recycled post-consumer PET in the domain of perfumes (*2014 Annual Report* 2014, p. 28). In order to

[28] Due to consolidation of two reports, data for certain years have been unavailable.

perpetuate and further the image attached to Natura, and especially the sub-brand Ekos, the company tries not to leave any aspect of its Pan-Amazon operations to chance. Therefore, Natura operates according to a *Sustainable Use of Social Biodiversity Products and Services policy,* that ensures fair benefit sharing with supplier communities and sustainable use and management of ingredients and assets (*2014 Annual Report* 2014).

Table 6: Quality of Relationships (Consumers internationally and in Brazil only)

Quality of Relationships	**2011**	**2012**	**2013**	**2014**
Consumer loyalty internationally		49	54	64
Consumer loyalty Brazil	66	51	52	64

Source: 2014 Annual Report. (2014). São Paulo: Natura

Risk Management - Risk affecting Amazon operations

Natura takes risk management very seriously at all levels and at all its locations. The company's attention to potential risks arising from its operations in the Amazon, with pronounced volatility and peripheral challenges, e.g. forest degradation and deforestation, a lower human development index (HDI), lack of infrastructure and inferior communication means, as well as bureaucratic legislation, suggests that the company has to proceed diligently. Generally, the company classifies risks into two categories. First, strategic risk, *viz.* risks affecting company's ambitions and continuity; second, operational risks, *viz.* risks related to the internal process. Although the company admits that it is difficult to gauge what effect climate change for instance has on its risk management, it tries to internalize as many business related impacts as possible through strategic socio-environmental mitigation projects, if possible (Behar 2013, p. 24).

Risk mitigation policies and programmes at Natura always need to be congruent with the triple-bottom-line principle, as this makes up for a big part of the company's value proposition. Any infraction of these principles can adversely affect the company's integrity and brand value. In order to circumvent material and social risk factors in the Amazon, the company avails of programmes and policies that take an integrated approach in the form of socio-environmental risk mitigation projects. Noteworthy are Natura's Carbon Neutral Program, in conjunction with REDD+ offsetting projects in the Amazon and Natura's policy for the Sustainable Use of Social Biodiversity Products and Services.

Within the Carbon Neutral Program, the company has three action categories through which it can address emissions: 1) through a greenhouse inventory throughout the entire value chain; 2) reduction of greenhouse gases through innovation in processes and activities; 3) offsetting, through the acquisition of carbon credits from accredited projects in the voluntary market. One exemplary project falling into the category offsetting is the purchase of indigenous carbon credits from the Suruí Forestry Carbon Project, developed by the Paiter Suruí people in the Sete de Setembro indigenous region, within states of Rondônia and Mato Grosso (2013, p. 50). The uniqueness of this project is unparalleled, in that it is the first REDD+ project on indigenous land to generate 170,000 tCO_2e in credits, with all proceeds going towards a 50-year management plan for 248 thousand hectares of forest land and the improvement of indigenous livelihoods on this land. To ensure the legitimacy of this project and that benefits truly accrue to the local indigenous population, the locals have been implicated through a Free Prior and Informed Consent (FPIC) process. The proceeds are administered via the Suruí Fund and monitored by the Funai, Brazil's National Indian Foundation (2013, p. 50). This

constitutes a prime example of pre-emptive risk mitigation.

Aiton Krenak for instance, who is an intellectual and member of the Crenaque tribe of Minas Gerais, contends that the local answer should be attained through presenting your company's intentions and listening, congruent with Convention 169 and the Convention on Biological Diversity. "That way things will grow more harmonically" for companies like Natura that can avoid costly law suits over land violations and miscellaneous other local infractions (personal communication Aiton Krenak, July 18, 2015). Particularly companies of scale tend to contravene these principles all too often, ending in public controversy, high legal expenses, loss of integrity and sometimes a loss of their licence to operate.

Second, the Sustainable Use of Social Biodiversity Products and Services highlights the dependence of Natura on biodiversity inputs and an intact environment. In order to refine the process of finding suitable socio-environmental risk mitigation measures, the company has partnered with specialists from initiatives, such as The Economics of Ecosystems and Biodiversity (TEEB). Over time the company is hoping to put an adequate value on ecosystems and biodiversity, while improving the assessment of impacts on society. Ultimately, the company will be able to attach socio-environmental gains and losses to its production activities and improve its risk assessment capability (Behar, 2013, p. 31).

Social biodiversity guarantees that monetary and non-monetary benefits are equitably disseminated to supplier communities, while obliging local suppliers to adhere to sustainable management of ingredients and assets. Similarly, the Amazon Program promotes sustainable business in the region, entailing measures that bring the region up to speed in order to create the conditions enabling a sustainable forest economy. Consistent with priorities in the region, risk is averted through strategies in the sphere of *1) Science, Technology and Innovation*; 2) *Sustainable Production Chains* and 3) *Institutional Reinforcement*. It is important to note that *institutional reinforcement*, in particular, addresses peripheral and oftentimes socio-economic issues rooted in the Pan-Amazon region, e.g. education and non-timber related forestry livelihoods. These are frequently addressed in collaboration with state governments, state departments and organizations, e.g. the company's establishment of the Amazônia Educational Support network (RaE PaM) in partnership with the education departments of 30 municipalities in the northeast of Pará and in the Rio Juruá/ Amazonas area in order to deal with socio-environmental problems, like poverty, deforestation, poor education, affecting the company's on-site operations at large (2013, p. 56).

4.1.5 Performance evaluation

A comprehensive summery of Natura's performance evaluation can be found under appendix 7.5.1.

Learning perspective

Natura's *Relationship Network*, the backbone of its operations is highly reliant on educational initiatives as a way to create value for the company and society at large. Therefore, education is not seen as isolated; instead the company tries to raise the potential of all its stakeholders. Considering different realities in the Amazon region, the company has adapted its priorities to local circumstances, which entails strengthening of local education, innovation potential and required infrastructure, in order to be able to properly harness the workforce potential in the region, as a company and also make locals employable by other companies in the region.

Efforts that do not benefit the company immediately, but in the long run, are efforts that reinforce education infrastructure in the company's priority areas of operation. Noteworthy efforts that are associated with this end are the establishment of RAE PAM, the Amazônia Educational Support network, fostering quality of local education in collaboration with educational departments and 30 municipalities in the northeast of Pará and in the Rio Juruá/ Amazonas area; partnership with the Pacto pela Educação do Pará (Pará Education Pact), to assess quality of curriculum and development of teaching plan in Benevides, where the company has its soap factory.

In terms of its supply chain, largely entailing communities, the company provides training and workshops in sustainable production techniques, coupled with occupational health and safety training (Behar, 2013, p. 116). A further priority, within the learning perspective, is the capacity to create knowledge, which Natura has cemented with the inauguration of Natura Amazônia Innovation Center (NINA) and the Natura Amazônia Campus in 2012. This has provided the company with a platform, to initiate the creation of local projects and opened the door for joint-research projects with universities, institutes, agencies and NGOs, conducive to growth and performance enhancements. To strengthen R&D capacity, the company also seeks to deploy one thousand researchers in the region. Through the company's Policy for the *Sustainable Use of Social Biodiversity Products and Services*, benefits are derived not only from access to traditional knowledge and biodiversity, but are also reverted back to communities. In addition, it also capacitates communities to make use of local assets, organize and add local value beyond the relationship with the company. All initiatives are spurred by the company's goal to generate R$ 1 billion from regional business operations.

Process perspective

Natura's local value-adding processes largely rest on the three pillars of the Amazônia program: 1) Science, Technology and Innovation; 2) Sustainable Production Chains and 3) Institutional Reinforcement. Established in 2011, this program creates the framework conducive to the company's sustainable business operations through physical infrastructure, e.g. NINA and its local manufacturing site Ecoparque, and intangible resources, e.g. a knowledge creation and dissemination platform, know-how and also invaluable institutional partnerships leading to socio-environmental economic development. Physical infrastructure projects like Ecoparque, for 100% locally produced soap in Pará, can be credited for making the supply chain more efficient, by consolidating production steps, previously outsourced to third-party manufactures, reducing transport routes and CO_2 emissions. Ultimately, this adds value to the company and the region. This constitutes a prime example of a project leading to growth, performance and risk mitigation, making it a triple-bottom initiative. The cornerstone of all its actions and commitments are status indicators and constant performance monitoring, including quality of relationships with suppliers, employees and consumers, percentage commitments and displays of active ingredients sourced from the Amazon and financial value generated from business in the Amazon.

To solidify its presence in the Amazon with a broad spectrum of initiatives, as part of the company's Carbon Neutral Program, the company is investing in REDD+ carbon-offsetting projects in Amazon regions. Although offsetting projects are not directly affiliated with its supplier communities, —exemplified by the Suruí Forestry Carbon Project— Natura seeks to use these projects not only to meet strategic objectives in the sphere of pollution prevention, but also as a way to enhance socio-environmental benefits in the Amazon region. This

indicates a strong correlation to the objectives *Eco-ethics* and *Growth - Long-term strategy*. Natura's most prominent sub-brand in terms of business volume and positioning, Ekos, can be seen as a cataclysmic product within the company, leading to the Amazônia Program and the business model *Ekos-valuing social biodiversity*. Under the auspices of this sub-brand, the company commits to sourcing 30% of all its active ingredients from the Amazon by 2020, thereby amplifying holistic benefit sharing with agro-extractivist communities, leading to preservation and sustainable commercialization of biodiversity products and services. Ekos-100% Amazonia Soap showcases this commitment very well. To ensure maximum transparency regarding the *status quo* of supply chains in the Amazon region and integration with other management systems, the company implemented the *Natura Social Diversity system*. Essentially a geographic information system that enables online localization of local investments undertaken, production statuses and the state of local infrastructure. In the field, tablets are employed to collect and synthesize relevant information on the fly. The innovative pledge to source 30% of its active input from Amazonian biodiversity by 2020 can be seen as the single most important trigger for overall growth of sustainability advantaged products, and triple-bottom-line benefits in the Amazon region.

Stakeholder perspective

Stakeholder engagement is a far-reaching part of Natura's operations, company-wide and in the Amazon region. Relationships in the Amazon region are predominantly governed by the inclusion of agro-extractivist communities, enabled through the company's social-biodiversity programme. It is premised on benefit sharing through access to genetic heritage and concomitant traditional knowledge, while creating economic opportunities through access to local goods and services, associated with biodiversity. Therefore, the company spawns a wide range of socio-environmental and status indicators, including families to be reached through this policy by 2020 (2,106 out of 10,000 reached to date), relevant network indicators, e.g. human and social development in supplier communities, the company's adaptation of the human development index (HDI), and the company's biodiversity strategies, as seen in appendix 7.4.1.

In order to properly capture contextual progress of its interaction with its supplier communities, the company has created the BioQlicar program, as an extension of its company-wide Qlicar program. BioQlicar keeps track of communities' access to human, social, physical, environmental and economic resources; progress is captured in a single average in the range of 0 to 5. After consultation with supplier communities, it was determined that in 2013 the company achieved a value of 3.76, a slight drop from 3.80 in 2012, and in both cases failed to achieve its goal of 3.89. Transparency and integrity are part of the company's value proposition and accordingly full disclosure and communication to a wide range of stakeholders is the key to ensuring continued trust. In light, of its expanding role in the Amazon, the company has devoted many sections of its openly available *Sustainability Vision 2050* report to the planned initiatives in the Amazon region, e.g. a map explaining socio-environmental benefits of new Ecoparque plant that produces 100% Amazonia Soap. Together with its voluntary ingredient table on its Ekos line, delineating shares of natural and certified ingredients (see appendix 7.4.1), the company reinforces public education and awareness of the public and brand strengthening of the Ekos line, conducive to sustainable growth.

Another example of company-wide policies that percolate from the board level down to the

employee and supplier-community level is the ombudsman services that helps to map and mitigate risks, relating to environmental and ethical conduct, supply chains, etc. Irrespective of the level of the complaint, all complaints, criticisms or praises are considered equally and anonymously by the Ethics Committee, unless the group or person wants to be identified publically. The way the policy has been adopted by the company testifies to a high level of progressiveness, in that it also involves in-house outsourced workers, e.g. suppliers that also use Natura's facilities like Ecoparque for processing of ingredients, suppliers and supplier communities.

Given the complexity of socio-economic and environmental issues in the Pan-Amazon region and its dependence on biodiversity as a source of innovation and triple-bottom-line wealth, it likes to include a broad spectrum of external stakeholders, like NGOs, universities and agencies. One initiative that takes an all-encompassing approach is Natura's funding of one of the most comprehensive study on the economic cost of the loss of biodiversity and the degradation of ecosystems attributed to business operations through TEEB (The Economics of Ecosystems and Biodiversity) by NGO Conservation International. Hitherto, the company has tested the TEEB methodology on assessing the feasibility of using agroforestry as an alternative to monocultures for palm oil production (2013, p. 31). The company explicitly designates this a triple-bottom-line management initiative.

Other interactions with external stakeholders entail the "Alternating School" project, a joint effort between Instituto Natura and NGO Gestão de Interesses Públicos (GIP), aimed at increasing quality of secondary education in rural areas of the Amazon. Part of Natura's third work-front, *institutional reinforcement*, is an effort to create the framework conditions for higher socio-economic development in the region, a key factor in reducing destruction of biodiversity and deforestation. The company's verification and monitoring of different aspects relating to stakeholder management alludes to an integrated and long-term view, exhibiting characteristics pertaining to *growth*, *performance*, *risk management* and triple-bottom-line value creation.

Financial/Triple-bottom-line perspective

Natura's comprehensive management in the Amazon would not be possible without triple-bottom-line management at parent-company level, as many initiatives, policies seamlessly transfer over to its Amazon operations. The company's overall goal has been to achieve full integration of designated externalities into business decisions. While the company has decreased investments in formal certification EMS schemes like ISO 14001 for its environmental strategy, it has articulated a thorough triple-bottom-line management vision in *Sustainability Vision 2050*. This report, available to the public, entails business directives until 2050 and material commitments to be fulfilled until 2020. To ensure the quality of triple-bottom-line governance, the company is subscribed to GRI, as the first Brazilian company and complemented by the B Corp certification, making it the largest company in the world to attain this recognition.

While the company has already expressed material indicators for years, also including its suppliers, the company is adamant about understanding the negative and positive impacts of its business operations on ecosystems and biodiversity, and vice versa capturing environmental impacts on the company's value chain. To achieve this end, the company has initiated engagement with TEEB and has commenced developing Environmental and Social Profit and Loss accounting (ESP&L), essentially monetizing applicable social impacts for its

stakeholders, e.g. R$ 1 billion in revenues might be, in fact, less worth when accounting for carbon emissions. Supplementary to the innovative management initiatives, the company employs an LCA for all its products, focusing on waste and carbon emissions from the conception of the product to its delivery. The company's commitment to reduce greenhouse gas emissions by 33% in 2020 considering the base year 2012, provides a good example of a goal that has been established at parent-company level, affecting its operations in the Amazon and resonating with the company's triple-bottom-line mandate. First, the consolidation of work stages through its new soap plant has reduced travel distances and concomitant CO_2 emissions and second, it has led to the creation of indigenous carbon offsetting projects.

From the vantage point of the financial perspective at site level, the company's commitment to turn over R$ 1 billion by 2020 in the region has been cataclysmic in capacitating the region socio-economically. Along with the strong positioning of the Ekos sub-brand, containing largely biodiversity ingredients and post-consumer material for its packaging, the brand is a strong vehicle for sustainable corporate value and local value creation in the Amazon.

4.2 Precious woods

4.2.1 Company context and designation and description of business unit

Precious Woods' company profile and context

Precious Woods AG (PW), founded in 1990 in Zug, Switzerland, is one of the leading producers and sellers of FSC-certified timber and veneer. It has subsidiary offices in Brazil, Gabon, the Netherlands and Costa Rica, employing 1557 people to date. In 1993 the company entered the stock market, while further land acquisitions, reforestation initiatives and the company's initial expansion to Brazil was financed through off-market capital (Martinoli, 2013). Precious Woods exhibited a net income of USD 22.6 million during the first half, of 2015, which is 11.7% lower than last year's result of USD 25.6 million. PW generated a gross profit of USD 13 million, slightly exceeding its previous year's result of USD 12.9 million (*Halbjahresbericht,* 2015). Until 2005, PW was primarily occupied with reforestation. The company's breakthrough towards becoming a fully integrated timber group, spanning holistic forest management of tropical forests and sales of timber products in the European marketplace, came with the acquisition of one of PW's leading customers in the Netherland, A van der Berg B.V. and the founding of Precious Woods Europe (Brouwer, 2007).

The company prides itself for its ecological and social track record, which it has been fostering, since entering the market in Central America, Brazil and Gabon in the early nineties. Transparent reporting, along with independent FSC certification have been key to the company's veracity. PW is characterized by a drive for technical and social innovation, and educational initiatives for its employees. For instance, the company has assumed a pioneering role in inventory cataloguing, by employing GPS to locate harvest-ready trees (Martinoli, 2013). The company alleges that its workers are an indispensable element and the key to success. In spite of its efforts and recent successes, PW struggles to remain profitable and continuously needs to strategize, attributable to the fluctuating demand and wood prices, political and local issues. In 2011, for example, due to indebtedness, the company had to sell off 75% of Precious Woods Central America, which made the company largely debt-free (Martinoli, 2013). In terms of its vision and values, the company aligns very closely with

sustainability as part of its corporate philosophy. The company illustrates a strong commitment towards creating added value in the economic, ecological and social sphere, while delivering this value to its investors, employees, business partners and miscellaneous other stakeholders (*Preciouswoods.com | Home* n.d.). The company's dedication to sustainably sourced tropical woods becomes apparent, when considering that worldwide a mere 11% of tropical and subtropical forests are FSC certified, out of which PW holds 6%. The company maintains that "the best protection of forests is ensured, when the indigenous population acknowledges that the forest is of existential value" (Martinoli 2013, p. 4).

Designation and description of on-site unit in the Amazon

Precious Woods Amazon (PWA), located in Itacoatiara, 300 km east of the city of Manaus, is the company's Brazilian operations unit (Brouwer, 2007). Operations in Brazil commenced between the years 1995 and 1997, but were replete with problems relating to reforestation and the processing of wood.

Table 7: Site-specific profile

Site indicators	Value/Description
Managed forest	430,000-500,000 hectares of FSC certified forest
Production 2014	11 581 m^3
Production 2013	11 698 m^3
Output in % compared to previous year	1.0 % below previous year
Local beneficiaries of PW's business activities	640 families, totalling 3200 people

Source: Preciouswoods.com | Home. (n.d.). [Web page]. Retrieved from www.preciouswoods.com: http://www.preciouswoods.com/site/index.cf

Amazon your business, 2007

Due to the company's FSC certification, the company needs to adhere to a strict harvesting schedule. In the context of the Amazon, this means that from July up until December, PWA needs to harvest all its timber. During the rain season, i.e. from January to July, it is prohibited for PWA to cut any trees. The company must use this time to capitalize on its inventory reduction. In conformance with its FSC certification, it needs to harvest an array of different wood types, in order to maintain biodiversity (*Halbjahresbericht* 2015, p. 4).

Apart from reforestation, forest management and downstream timber processing, the company is also active in the emissions certificate trade. The certificates are generated through PWA's co-owned wood-chip-powered biomass plant in Itacoatiara, in which PW has a stake of 40%. BK Energia, the name of the plant, generates energy from 300 tonnes of saw mill rejects that the plant receives daily (Heibling, 2014). This constitutes an extension of the value chain, supplying 90,000 people with clean electricity from renewable materials, who would otherwise be using diesel generators. The certificates are being sold on the Chicago Climate Exchange, making PW the first forestry company to sell emission certificates on the Chicago Climate Exchange (personal communication, Christian Marzari, July 16, 2015,). This constituted a major leap towards becoming an integrated timber group.

4.2.2 Characterization of company's objectives

4.2.3 Performance objectives and references

The on-site unit of PW, namely Precious Woods Amazon can be characterized as follows, based on its objectives and strategic references, as seen in table 8.

Table 8: Performance objective and reference profile of Precious Woods

Strategic objectives	Performance references
Pollution control/ Regulatory compliance:	No violations of regulations, voluntary agreements, and general codes of conduct voluntarily adhered to
Pollution prevention:	Reference values of best preventive technologies and practices available to the sector
(Eco)-Ethics:	Specified principles (e.g., zero discharge, zero waste, use of only renewable energy) or general environmental decision-making based on ethical concerns
Sustainability:	Use of sustainably generated renewables in place of dissipatedly used inputs. Integrated management of environmental, social, and economic aspects of triple bottom line by using an integrated management system. Involvement of, and transparency to, third parties

Overall, the performance objective and reference profile of Precious Woods Amazon suggests that the company can relate to four out of the six provided performance objectives, but only few of the corresponding references. This is particularly apparent in regard to procedural management systems, i.e. GRI, AA1000, SA 8000, which is attributed to the fact that the company is classified as medium sized, operating on a well calculated budget, which needs to account for increases in fuel prices, falling wood prices and various other external fluctuations that can impact the company's margins (*Halbjahresbericht,* 2015). Attaining this certification is often expensive and requires extra resources for company-wide enforcement. On top of these considerations, the company already subscribes to the FSC label, which is sector-specific and covers legal, indigenous and labour rights, multiple use/benefit systems, and knowledge of environmental impacts of forest management practices (FSC—Certified Post-Consumer Recycling and Mixed Sources, 2010). Finally, it is also part of the company's value proposition to the customer.

Pollution control/ Regulatory compliance

Congruent with the overall mission of the company, to stay transparent towards its shareholders and stakeholders, while maintaining maximum integrity on all of its operations, the on-site unit of the company indicated that it practiced *control/regulatory compliance*. The corresponding performance references, i.e. no violations of regulations, voluntary agreements, and general codes of conduct voluntarily adhered to, are therefore also applicable. This is credible, given that Christian Marzari, the company's previous manager of their Brazilian operation claimed that the company had always upheld the importance of local forestry laws,

as they also dictate the ownership rights, which the company has been very dependent on. The initial purchase of 500,000 hectares of land between 2001 and 2002 was characterized by problems relating to legal access to ownership rights. In fact, the company has been complaining about lax and slow enforcement of forestry laws, as rights to legally harvest are tied to clear land ownership. Land ownership however, is often fraudulently acquired and sometimes has up to four land titles attached to it (personal communication, Christian Marzari, July 16, 2015,). During the time when the company started acquiring land, proper laws regulating land ownership were still work in progress and bureaucratic on top of that, which hampered fast and transparent land transactions (personal communication, Christian Marzari, July 16, 2015). Particularly, for a company, whose reputation is reliant on certification and maximum transparency, uncertainties about legitimate landownership can adversely affect the value proposition to the customer. By sourcing raw materials from the Amazon, in particular timber, companies like PW are under a special amount of scrutiny by its stakeholders, including the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) and various NGOs. Therefore, maximum transparency and status of legal enforcement is essential.

Pollution prevention

The company also indicated that *pollution prevention* is one of its top objectives, with the concomitant performance reference, *reference values of best preventive technologies and practices available in the sector*. PW's two main environmental aspects are the generation of organic waste, i.e. wood chips and sawdust and potential emissions from diesel generators[29], powering their sawmill. The company showed its adherence to best preventative technologies and practices by constructing a biomass plant that uses between 60 and 65% of the tree as fuel for its energy plant (Heibling, 2014). Thereby powering the plant with clean and renewable energy, while curbing its emissions from diesel generators.

(Eco)-Ethics

PW also indicated that it aligns with (*Eco)-Ethics* and the corresponding reference *specified principles (e.g., zero discharge, zero waste, use of only renewable energy) or general environmental decision-making based on ethical concerns*. This objective and its corresponding reference echoes the company's "vision of sustainability, an orientation towards the long run, as well as distinctive courage towards pioneer work and readiness to assume risk, as a prerequisite to create possibilities" (Martinoli, 2013, p. 5). The company's actions, e.g. the construction of the biomass plant, to cope with the waste and substantially mitigate the company's emissions, are probably the best indication of the confluence of stated objectives and the operationalization thereof. Although the company did not indicate procedural approaches, e.g. AA 1000, SA 8000 or conformity with a formal reporting scheme, such as GRI, in part due to additional expenses and bureaucracy, the company's commitment towards ethics is clearly articulated in the company's mission statement and resulting actions. PW's concern with ethics is also reflected in the educational campaigns that the company undertook to foster local knowledge about sustainable agroforestry techniques to increase yields for food production, which was partially purchased by PWA for the company's camp canteens. In a similar vein, the company also taught locals how to produce crafts like necklaces made of seeds, using simple means, to sell to tourists, so they could have a share in the ecotourism boom that has taken root in the region in recent years (personal communication, Christian Marzari, July 16, 2015). These

[29] Diesel generators are the leading power source for operations in the Amazon Rainforest, attributed to the fact that many smaller towns like Itacoatira are cut off from the national grid.

efforts were largely undertaken due to the company's concern over the socio-economic issues and the incontestable link to deforestation.

Sustainability

The antecedent description of PWA's objectives and corresponding references, allude to the objective of *sustainability*, which the company exhibits in its other objectives. Most noteworthy are the company's socio-economic efforts towards creating long-term economic alternatives to illegal logging for local communities, the resounding driver of deforestation.

4.2.4 Value driver objectives and references

With respect to the company's characterization of its strategies that add financial value through sustainability, or through other environmental and social improvements, the company felt most aligned with the objective *revenue growth from sustainability advantaged products, services and/or strategies* and its corresponding references, *new markets and geographies*, *new customers and the market share, product and service innovation*, and *long term strategy*, as seen in table 9.

Table 9: Value Driver Metrics and Performance References for Precious Woods

Value Driver Metrics	Performance references
Growth Revenue growth from sustainability-advantaged products, services and/or strategies (S/G)	**New markets and geographies** Expanding market share based on enhanced demand for sustainability-advantaged products. **New customers and market share** Gaining sales to new customers and geographies based on brand and reputation for sustainability product leadership, especially where those attributes are differentiators **Product and service innovation** Developing innovative sustainability-advantaged products and services that better meet customer needs while minimizing unwanted social or environmental consequences and/or enhancing desirable social and environmental outcomes **Long-term strategy** Implementing a long-term strategy and plan, along with the required investments, to deliver sustainability-advantaged growth

Growth - New markets and geographies

The leading differentiator for Precious Woods is the company's assurance to the customer that all of its timber products adhere to the chain of custody of the FSC label. Accordingly, all its revenue is generated through 100% FSC certified timber products. Since the company's competitiveness and profitability largely rests on the price premium for FSC certified timber, the company is highly dependent on the receptiveness and willingness of markets and different geographies to pay this premium, which is usually in the range of 20 to 30%. In regions like Europe where the FSC label is already well established, FSC has become a prerequisite more than a differentiator. While the consciousness and demand for ethically sourced wood has soared in Europe, Brazil, one of the principal markets for precious woods is still driven by cheaper prices. In other words, a buyer in this geography will opt for a cheaper product, with undefined origin. In Brazil, where the playing field is not levelled for timber

producers, illegal loggers have a competitive advantage because they are not subject to the same rules and regulations as certified producers (personal communication, Christian Marzari, 16 July, 2015). This sentiment is reflected in the following quote:

> *Let's imagine that I am from Rio Grande do Sul, I'm a good person, I want to invest in timber production in the Amazon. I do everything correctly, the management plan, I get the necessary permits, pay labour taxes etc. I will face unfair competition, and my company will close in the red.* (*The Amazon Under Debate: Opportunities, Challenges and Solutions* 2010, p. 148)

Accordingly, the company needs to explore markets that are not saturated yet, like Europe and where consciousness for sustainably sourced timber is high.

Growth - New customers and market share

While sustainability and maximum transparency are essential components of the company's business operations, it also needs to ensure profitability by pragmatically identifying its customer's needs and a good understanding of its international markets, i.e. Europe, North America and increasingly also Asia, but also its local markets in Brazil and Gabon. Since the company offers over 80 different tropical woods, of which half are well-known amongst its customers, PW needs to ensure that it is able to connect the characteristics, particularly of the lesser known wood types like *Louro Itauba* and *Piquia*, with the customer's needs in its three segments, construction, retail and do-it-yourself, as well as the wood processing industry (Martinoli, 2013, p. 24). Given the conditions imposed on them by the FSC label to diversify the types of timber it harvests, PW continuously strives for pioneering ways, in which its wood products can be employed, to fortify its share in the market and attain new customers. One instance in which the company was able to achieve this, was its introduction of *Angelim Vermelho*, a wood harvested in the Amazon, to the market segment of marine hydraulics, as well as sheet pile walls in construction. Precious Woods thus became the leading supplier of this wood, with a 15% share in its total turnover (Martinoli, 2013, p. 25).

Growth - Product and service innovation

Apart from the company's objectives to penetrate new markets with sustainability-advantaged timber and acquire new customers by bringing them certified exotic woods for a variety of purposes, the company also pursues innovative strategies that not only offset the impact of their operations, but in fact lead to desirable outcomes, socially and also environmentally. The biomass power plant that the company co-owns and co-financed not only prevents 45,000 tonnes of CO_2 from escaping into the atmosphere annually, while saving between 10 and 15,000,000 litres of diesel, but also supplies 75% of Itacoatiara's population with green electricity from renewables (personal communication, Christian Marzari, July 16, 2015). This has also increased the reliability of power supply relative to the diesel generators that malfunction regularly (Heibling, 2014). While PW's timber products exhibit a rather limited amount of post-sale environmental and social innovation aspects, desirable social and environmental outcomes are almost exclusively confined to the production phase and the value chain. Against the backdrop of adding value to its production process, the company continuously strives for new innovations, e.g. trying to produce its own biodiesel from its waste. It also empowers local communities to guard land from illegal intruders through technical equipment and know-how (personal communication, Christian Marzari, July 16, 2015). Profit seeking inspires these innovations, but the company always ensures that it creates added value for all its stakeholders and the environment it depends on.

Growth - Long-term strategy

Companies that want to build legitimacy and a positive track record in terms of sustainability-advantaged growth in the Amazon, need to employ a long term-strategy. Precious Woods fulfils a lot of these criteria, as its presence is highly dependent on building rapport with

surrounding communities and locals, so called *ribeirinhos*[30]. Thus, it is essential to devise strategies to involve these communities sustainably, by bringing them up to speed with the company's intentions, while overcoming mistrustfulness of the inhabitants and most importantly, creating economic opportunities for local residents. Concretely, this means bringing in social workers, psychologists and agricultural technicians, to help establish an information exchange and to conduct *endomarketing*[31], according to Marzari, i.e. conveying to locals that the company has no bad intentions, but is here to protect the forest and collaborate with its local residents (personal communication, July 16, 2015). For the company to continue its existence in the long run, it is also indispensable to delegate its resources towards the protection of forests, which ultimately comes down to considerations of concessions and forest lot acquisitions. PWA is also subject to political risks, which Brazil and especially the Amazon exhibit in different ways. These risks need to be taken into account when designating locations for facilities. To counter these risks in the long-run, the company leverages its existent know-how and networks. Finally, its long-term strategy also involves running educational campaigns on FSC certified wood, in order to solidify the positioning of its timber products, and the ability to respond to market fluctuations, as the price of wood can be highly volatile (Martinoli, 2013).

4.2.5 Performance evaluation

A comprehensive summery of Precious Woods' performance evaluation can be found under appendix 7.5.2.

Learning perspective

In the *learning* perspective, PWA exhibits tenets that are consistent with the *sustainability* objective through the transfer of knowledge that benefits current and future generations and ultimately the company. Initiatives supporting this claim, are PWA's community projects that are aimed at establishing and improving livelihoods through increasing alphabetization and teaching practical skills and know-how. While PWA has the obvious intention of getting locals up to speed with its local operations and thereby employable, it also wants to create lasting value for surrounding communities. There are a number of educational activities that evidence this claim. For example, the *ribeirinhos* are taught diverse planting techniques that enhance the productivity and food production ability of the forest, without causing any harm to it. To reinforce and incentivize the adoption of these teachings, PWA buys the produce from the locals for its own forest canteens (personal communication, Christian Marzari, July 16, 2015,). Consistent with the company's mission to contribute to awareness and prevention of unsustainable uses of the rainforest, it also instructs locals on how to make crafts, such as necklaces made of seeds, to sell to tourists, since ecotourism has been booming in many parts of the Amazon (personal communication, Christian Marzari, July 16, 2015).

In the first instance, unsustainable activities, like cattle ranching and illegal logging constitute the majority of deforestation, but overpopulation on forestlands amplifies this problem manifold. Accordingly, PWA has added sexual health education to the curriculum, in order to keep unsustainable population increases in the region at bay (personal communication, Christian Marzari, July 16, 2015). This measure can be interpreted as risk management on the part of the company, since a population explosion on its forestland could jeopardise its land

[30] Ribeirinhos, literally translates into river dwellers, which refers to the majority of non-indigenous people, who have established themselves along one of the many rivers in the Amazon.

[31] Endomarketing designates an internal marketing strategy, which has the stated goal of raising awareness, informing and motivating employees. It is believed that well-informed and content employees can better convey the value of company's products and services.

and compromise the quality thereof. The genuine efforts by the company to protect surrounding forests and bring socio-economic development to the area have been conducive to retaining and recruiting workers. According to Marzari's account, locals feel drawn to a company that has the wellbeing of the forest and its people at heart. To bolster productivity and sustain morale of its workers, the company is providing productivity bonuses on top of their salary, along with healthcare.

Process perspective

Within the *process* perspective, PWA illustrates the objectives *pollution control/regulatory compliance*, *pollution prevention* and also properties found within *sustainability*. The strict adherence to the FSC label should be highlighted here, which is the leading standard for the timber industry worldwide. The FSC label essentially governs the life cycle of every tree. According to these guidelines, PWA is obligated to attain a *Documento de Origem Florestal* (DOC), a document of origin issued online by IBAMA. This document needs to accompany every log from its felling location to the saw mill, a requirement that only applies to natural forests. Strict guidelines like this one, are practically aloof in plantations, which is why many legal timber companies distance themselves from operations in the Amazon Rainforest, as FSC guidelines also amount to a higher cost structure for companies (personal communication, Christian Marzari, July 16, 2015).

The FSC label, however, does not only govern internal processes of PWA, but also the interaction with the surrounding population, whereby it is required to contribute to socio-economic development. For PWA, this means being a cataclysmic force, rather than a provider of gifts and welfare (assistencialismo), a policy the Brazilian government is practicing, much to the detriment of the company. Marzari remembered one example where locals wanted the company to provide access to electricity, which initially would have meant setting up diesel generators, but due to the fact that it was not in agreement with the company's environmental policy, it told the locals to seek help from the government. PWA however, said it would provide transport to the respective department— as transport in the Amazon is often hard to come by— and would also assist this process (personal communication, July 16, 2015).

Related to its internal operations, PWA employs forestry planning to mitigate invasiveness and damage to the forest. PWA's forestry planning rests on three pillars, firstly, identification of harvest-ready trees through GPS, which entails electronic identification and deposition of location, species, width and quality, ensuring knowledge about its inventory and possible uses; secondly, route planning, to guarantee safe extraction and minimum affliction to the forest; and thirdly, designating proper machines to meet the requirements, while economizing on fuel and keeping the harm to the forest as low as possible (Martinoli, 2013, p. 11).

Another important aspect of its operations towards fulfilling its environmental commitments and avoiding exposure to outside criticism is the designation of protected areas, prescribing the harvest exclusion of trees close to streams, shores or slopes. Additionally, there are also areas that remain untouched all together (*Preciouswoods.com | Home* n.d.).

One of the company's biggest feats however, exemplifying the notion of the triple bottom line, is its construction and co-ownership of a biomass plant, which delivers 9 megawatts and covers around 75% of Itacoatiara's electricity needs, adding value to its wood waste from the saw mill. In addition to selling the electricity for a competitive price to the state-owned power grid, the company is also generating CO_2 certificates, which are being sold on the carbon exchange in Chicago, yielding between US$ 2 and 3 million annually, an important contribution towards the company's breakeven point. This action in particular, feeds into the financial perspective, as it has contributed to company's revenue and productivity (personal communication, Marzari, July 16, 2015).

Stakeholder perspective

PWA is a company that tacitly capitalizes on stakeholder relations, as it does not only ensure its legitimacy and trust in the company's proper conduct, but literally its existence and long-term survival. Therefore, the company efforts and strategies within this perspective resonate with *pollution control/regulatory compliance* and *sustainability*. The company's most noteworthy stakeholders are locals, surrounding communities, federal and local government ministries, the FSC certification body and politicians, architects and NGOs.

A pertinent example that illustrates one of PWA's crucial stakeholder interactions, is the company's fulfilment of land title regulations, in order to attain the right to harvest on its acquired forest lots. Antecedent to PWA's operations in Brazil, it was not very difficult to attain land, in part because of the military dictatorship that promoted land grabbing for development and modernization purposes. In addition, proper enforcement of land titles by land registries, was practically non-existent. As a consequence, locals would indiscriminately deforest land and claim it for guarantees, in order to attain cheap loans in São Paulo, sometimes with up to four owners fraudulently attached to a single lot of land. This ended with Marina Silva, the former environmental minister of Brazil, as she implemented stricter land ownership laws. While this was a positive development overall, one aspect adversely affected PWA, which had purchased around 500,000 hectares of land in the first years of the new millennium. However, to attain harvesting rights on the purchased land, PWA needed to fulfil all of the new criteria of the legislation pertaining to land ownership. The sluggish bureaucracy—which still constitutes a major problem in Brazil today—that came with the new legislation made it impossible to fulfil all requirements in the desired timeframe. This constituted a legal risk that ultimately also affected the bottom line of the company. It highlights the importance of the political domain, which Marzari contends, is also the company's avenue to expedite the issuance of urgently needed environmental certificates by IBAMA.

This means when bureaucracy is too slow in processing requests, the company tries to leverage political contacts to put pressure on relevant institutions to at least issue a temporary certificate that enables the company to start harvesting, provided the necessary documents are handed in later. As already detailed earlier in the learning perspective, the company highly depends on local rapport with surrounding communities to ensure smooth operations, but also endeavours to bring long-term socio-economic development to counter deforestation, attributed to poverty and lacking knowledge. The company also constructively engages with NGOs that, along with architects, help in the proper and ethical selection of wood species.

PWA labour practices are accordingly characterized by adding value to all its stakeholders, e.g. directly impacting 640 families on its land, practicing and advocating forest stewardship and strong collaboration with local and federal government. This is also in keeping with the values of the FSC label, along with cutting-edge technology and techniques in solving on-site inefficiencies that also lead to triple-bottom-line performance enhancements. Financially speaking, PWA's efforts relating to forest stewardship and active collaboration with various stakeholders, illustrate a strong propensity towards risk management, first and foremost the reduction of operational risk, reputational risk and supply chain risk. Its modern technology and added-value efforts, albeit not always fruitful, like PWA's short-term business agreement with Swiss fragrance manufacturer Givaudan to produce essential oils from the company's by-products, can be classified as *sustainability-driven productivity initiatives* and *revenue growth from sustainability-advantaged products.*

4.3 Veja/Vert

4.3.1 Company context identification and description

Founded in 2004, Veja Fair Trade Société à responsabilité limitée (S.A.R.L.) is a French fashion brand, with headquarters in Paris, France. The company specialises in ethically sourced and environmentally sound materials in the production of its products, encompassing shoes, handbags and accessories. Veja's founders François-Ghislain Morillion and Sébastian Kopp envision a company that operates according to high social and environmental standards, promoting ecological farming practices and using their brand to draw attention to deforestation in the Amazon as well as to workers' rights and fair remuneration for workers (*Veja: An Ethical Passion for Fashion | Best Practice Exchange | the Guardian* n.d.). As of 2011, the company has had annual sales of € 7.5 million with an annual output of 120,000 shoes. In terms of recognition, the company was shortlisted for the Guardian Sustainable Business Award 2012 in the category supply chain and was featured in the British Vogue in 2012 (*Future Shapers: A Decade of Innovation in Textile Sustainability (2002-2012)* 2012). It is also noteworthy to mention that the company has joined, what is referred to as the slow-fashion movement[32], along with educational campaigns on sustainable consumption.

The company exhibits full integration in the sphere of its supply chain and sustainability. True to its credo, the company enforces this policy from the time resources are harvested in Brazil to when their products hit the shelves of Europe, including transportation, packaging and green electricity for their head office in France. In contrast to incumbent competitors, its business model does not rest on higher margins through paying below-market salaries to its producers, but instead, paying them 30% to 100% more than is paid on the world market. Despite this, the company remains profitable, largely attributable to its two pillars of business, namely cutting back on advertising expenses and employing just-in-time production.

While Veja has its main distribution in Paris, it also has a subsidiary in São Paulo, Brazil by the name of Vert. Their material extraction and production in Brazil spans multiple sites with four principal components in the value chain, exhibited here:

Table 10: Characteristics of Veja's Brazilian value chain

Material / Manufacturing	Harvesting site/Manufacturing site	Aspects of operations
Cotton	Céara State, Northeastern Brazil	• 350 freelance cotton farmers • Agro-ecological cotton grown by ADEC, a partner of VEJA[33] • Annual cotton production

[32] Slow fashion is a term coined by Kate Fletcher in 2007, designating a movement that is opposed to seasonal trends and characterised by very short life cycles (*About | Slow Fashioned* n.d.).

[33] ADEC (Associaçâo de Desenvolvimiento Educacional e Cultural) is a farmers' association that first started growing organic cotton in 1993 and is located in Tauá, in the semi-arid regions of the State of Céara (Northeast of Brazil) (*IBD Certifications* n.d.).

		23,000 kg • Partnership with ESPLAR, NGO providing tech. support to famers • Cotton organically certified by IBD[34]
Rubber	Acre State, south-western region of the Legal Amazon	• 90 rubber tapper families (seringueiros) contracted by Veja • Harvested in Chico Mendes Reserve • Rubber is harvested and moulded into sheets, using FDL-technology[35] on site.
Leather tanning		• Vegetable tanned leather and suede, without toxic tanning agents
Shoe assembly	Vale dos Sinos, Rio Grande do Sul State	• Factories are audited by Fair Trade labour organisations in regard to workers' pay, rights and working conditions

Source: Future Shapers A Decade of Innovation in Textile Sustainability (2002-2012). 2012

Essentially, Veja has three organizational levels, namely the parent company in Paris, the subsidiary in São Paulo and different operating sites all over Brazil, particularly in and bordering the Amazon.

4.3.2 Performance objectives and references

The company has not been able to supply relevant data pertaining to its performance objectives and references. However, Veja/Vert exhibits traits that suggest the company is pursuing *eco-efficiency*, *eco-innovation*, *(eco)-ethics* and *sustainability*, to guide its business strategies. Concerning measures and actions, linked to value-driving objectives, the company is likely to align with *growth* based on sustainability-advantaged products and *performance* based on annual cost-savings from sustainability-driven productivity initiatives. Risk is possibly the least applicable value-driver objective, since the company demonstrates very little risk potential, like reputational risk or regulatory risk, in part due to the relatively small size of the company and good oversight over its value chain. An isolated case of risk might be discernible in the sphere of supply chain risk, attributable to the company's policy of buying overstock raw materials to forestall future shortfalls due to weather-related harvest shortfalls and fair remuneration of farmers.

4.3.3 Performance evaluation

[34] The Instituto Biodynamico (IBD) is the only Brazilian certifier of organic products and biggest certifier in Latin America. IBD is recognised internationally by IFOAM (international market), ISO Guide 65 (European market, rule CE 834/2007), Demeter (international market), USDA/NOP (North American market) and and INMETRO / MAPA (Brazilian market).

[35] Smoked Liquid Sheets, also referred to as (Folha Defumada Líquida or FDL) are produced, using a technology developed by the University of Brasilia that enables rubber tappers to process the harvested rubber on site in the Amazon Rainforest.

A comprehensive summery of Veja's performance evaluation can be found under appendix 7.5.3.

Learning perspective

Veja's learning perspective for its on-site operations in the Amazon is largely confined to internal know-how it provides to its suppliers, since the company has very few employees on-site that work exclusively for Veja. Congruent with the overall problem present in the Amazon that working processes are still very cumbersome, Veja focuses on providing its suppliers with best-practice training and the latest know-how and technology, if available, to add value and improve efficiency. One initiative was to equip the *seringueiros* (rubber tappers) with the knowledge to handle resin and mould it into smoked liquid sheets (FDL), meeting the company's specification, as part of the company's local value-creation policy.

In recent years' sustainable rubber-tapping in the Amazon has lost much of its appeal and prestige, in part due to cheaper petrochemical and monoculture alternatives, reflected in the prices; between 1.60 EUR/kg and 1.90 EUR/kg for planted natural rubber from São Paulo and between 1 EUR/kg and 1.20 EUR/kg for synthetic rubber. To sustain workers' appeal to harvesting wild rubber and to keep working morale high, Veja pays 2.33 EUR/kg, in line with its buying policy, providing between 30% and 100% more remuneration for its co-operative cotton growers and rubber tappers.

Parallel to stable incomes, cotton farmers grow cotton according to agro-ecological principles, forbidding the use of any chemicals and pesticides, which enables the farmers to also grow food crops along with commercial cotton. This has been immensely influential in contributing to better health in the communities. In order to increase local value and to keep supply chains tight, the company has introduced *Folha Defumada Liquida* (FDL), smoked liquid sheets, developed by the Laboratory of Chemical Technology (LATEQ) at the University of Brasilia, without needing sophisticated machinery ("Going Wild for Rubber Sourcing Wild Rubber From the Amazon: Why You Should and How You Can," 2014, p. 9). That way resin can be processed into rubber sheets and sold directly to the shoe factory. This has doubled incomes of rubber tappers and given them an increased working morale. It should also be highlighted that there is no copyright on the technology, which enables the seringueiros to employ the technology freely, potentially yielding auxiliary economic activity (personal communication, Bia Saldanha, July 12, 2015)

Process perspective

The local process is diligently monitored, as it represents one pillar of the company's value proposition, namely to provide a product that meets style needs, while leaving the consumer with the knowledge that his purchase has contributed to the preservation of the Amazon Rainforest. Therefore, socio-environmental monitoring and accreditation of Veja's supply and production chain is critical. While formal certification is not the company's top priority per se, the suppliers need to comply with socio-environmental and agro-ecological principles. With this goal in mind, the company has had 97% of its 320 sub-contracted cotton producers accredited by IBD.

Additionally, certification, apart from backing up the company's claims, has been instrumental in drawing in other third-party partners to refine the quality of processes further. Another local management priority has been a three-year agreement in 2005 (has been extended) with ADEC (Associaçâo de Desenvolvimiento Educacional e Cultural), a farmers' association, ensuring steady and higher than average income for local cotton farmers. This has not only attracted more farmers, but has enabled the company to ramp up the company's supply from 3,000 kg of cotton to 23,000 kg of cotton between 2005 and 2011. Essentially this shows that

the company has a long-term commitment, stabilizing the supply chain. Through continued monitoring of the supply chain, Veja can ensure that intermediaries are kept to a minimum, reducing logistic costs and delivering better oversight, with more value accruing to poor farming communities in Céara State for instance. A further tool that the company employs company-wide and locally, is its investment in commitment to the supply chain, predicated on an open dialogue with producer groups and rubber tappers, at eye level.

To create an intimate and genuine relationship, the company has nine knowledgeable employees in Brazil. Worthy of note is Bia Saldanha, the company's supply chain manager and shareholder. Saldanha, not only possesses influential contacts in relevant state governments like Acre and knows most of the company's contracted rubber tappers, where large parts of the company's rubber is harvested, but is also intimately acquainted with the rubber extraction process[36]. In conclusion, the company's processes thrive off the efficient incorporation of its entire supply chains, particularly its contracted partners and the transparent and non-discriminatory communication between external and internal stakeholders, which is facilitated through liaising on-site partners like Saldanha.

Stakeholder perspective

The *process* perspective is therefore inevitably linked with the *stakeholder* perspective. Building rapport with communities has therefore become a keystone in ensuring a rigid supply chain, not subject to disturbances. To this end, Veja has direct relations with 90 families— in the Chico Mendes Reserve of Acre— whose livelihood is premised on rubber tapping. With their supply chain manager Bia Saldanha living in the reserve part-time and interacting with these families, supply chain shortcomings are addressed promptly and accurately. Similarly, close relations, enforced through liaising with partners like the farming cooperative ADEC, ensures that relationships remain conflict-free and beneficial to all sides. Simultaneously, Veja's non-negotiable maxim to work with small-scale producers, so they can live with dignity and be environmentally responsible, is a normative commitment that holds the company accountable to its on-site stakeholders and consumers as part of their value proposition. Through collaboration with local NGOs, like ESPLAR, the company gets to increase knowledge dissemination and implement best available techniques (BATs) along with its supply and production chain, providing opportunities to enhance performance gains, conducive to the financial bottom line.

Triple-bottom-line perspective

The parent company level is important to consider as the policies and initiatives at this level are closely intertwined with operations in Brazil all the way down to the suppliers in the Amazon, largely due to the lean supply chain. From the vantage point of governance, Fairtrade certification should be highlighted as it is part of the company's full designation, and a principle pursuant to which the majority of processes operate, while enabling the collaboration with various certifying bodies along its value chain, e.g. the Brazilian certifier IBD. The company derives much of its legitimacy to charge higher—or at least on par with incumbent competitors— prices for its sneakers from the higher cost structure associated with certification and higher working wages of its suppliers.To remain profitable and to sustain its social and environmental mission, the company pursues a "no advertisement" policy and rather relies on word-of-mouth and recognition by newspapers, magazines and celebrities, as a means to solicit brand attention[37].

[36] Saldanha's knowledge stems from her experience as co-inventor of plant-based leather (couro vegetal), made from natural rubber. The "leather" was made into bags and distributed under the brand Treetap that forged a notable collaboration with the French fashion label Hermès in France.

[37] The company does not endorse celebrities for instance by giving out freebies, as this adversely affects the tight calculation of payment for the suppliers and manufacturers; instead it relies on the appeal of the design and that consumers buy shoes

The company also sets itself apart from other incumbent competitors, in that it notifies the public about limitations and the rationale for occurring shortcomings, e.g. that the laces are not made from organic cotton as their demand is not high enough. Exemplary is also the company's disclosure of problems in its supply chain, like a caterpillar plague that, as a last resort, had to be scotched with pesticides. Tt bought this batch of cotton regardless, due to its purchasing agreement and its commitment to social realities. These are all aspects that tacitly entice conscientious customers that subscribe to the notion of slow fashion, and that often exhibit higher buying power. In turn the company is well positioned to retain customers that put a monetary value on Veja's "commercial disobedience" approach.

This is compliant with the company's fourth pillar, Veja's "cultural pillar", essentially, an addition to the triple-bottom-line concept, premised on promotion of slow fashion and advocacy for sustainable consumption. This is achieved through leaflets, enclosed with Veja's sold products, disclosing production steps and the origin of materials used in its products. In addition, *Centre Commercial,* a vendor for conscious and sustainable products and an exhibition centre in Paris, amplifies Veja's awareness campaign and showcases brands' ecological and sustainability practices and values (*Future Shapers A Decade of Innovation in Textile Sustainability (2002-2012),* 2012). In relation to financial value the company's "zero-zero" policy, positing zero expenses for advertising and "zero stock" or "just-in-time" for finished products, has ensured that the company can foot the bill for the 3 to 4 times higher production costs for high-quality products that are produced under ethical and ecologically conscious principles.

In order to mitigate and compensate foreseeable shortfalls due to environmental idiosyncrasies, the company buys more raw materials in high-yield years, which not only ensures more continuity in the company's business cycle but also benefits farmers and suppliers in the Amazon, to overcome nature-related tribulations. With an annual growth of 20 percent, the company is illustrating that its unique approach is working.

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for the principles they stand for (*Paris's Favorite Sneaker Brand (That You Haven't Heard About) - the New York Times* n.d.). For examples on articles written about the company consider reading

1.Veja: An Ethical Passion for Fashion | Best Practice Exchange | the Guardian. (n.d.). [Web page]. Retrieved from www.theguardian.com: http://www.theguardian.com/sustainable-business/best-practice-exchange/veja-ethical-passion-fashion

2. Paris's Favorite Sneaker Brand (That You Haven't Heard About) - the New York Times. (n.d.). [Web page]. Retrieved from www.nytimes.com: http://www.nytimes.com/2015/10/27/t-magazine/veja-sustainable-shoe-brand.html?_r=1,

3. Veja, Marque De Baskets - Le Commerce Équitable Au Brésil. (n.d.). [Web page]. Retrieved from www.brasilbeleza.com: http://www.brasilbeleza.com/veja.htm

5 Analyses of contextual aspects

This chapter explores *research question 2* by firstly identifying more generally, the drivers of selected beyond-compliance/sustainable companies relying on the Amazon for raw materials and labour, complimented with expert inputs, in accordance with *research question 2a*. Ancillary *research question 2b* answers the question of inhibiting factors[38] to full business sustainability in the Amazon. The analysis is conducted on the basis of the responses given by Natura, Precious Woods and Companhia de Desenvolvimento de Serviços Ambientais de Acre (CDSA)[39]

5.1 Analysis of drivers for business sustainability in the Amazon

The Amazon constitutes an extremely complex environment for doing business, based on principles of sustainability, as it is replete with potential business risks and practically devoid of a properly balanced legal framework, let alone its enforcement. Quick financial returns are thereby hard to come by, requiring perseverance and a long-term vision according to Dande Tavares (personal communication, August 7, 2015). This section will therefore explore the applicability of pre-determined drivers for pursuing a sustainable business path premised on Amazon inputs. To see an overview of responses based on designated criteria, refer to appendix 7.3.

Strategic comparability within the industry

Strategic comparability, illustrated by all respondents, constitutes a critical point in pursuing integrated sustainability. Based on companies, like Precious Woods and Veja that exhibit a higher cost structure due to strong adherence to beyond-compliance principles within their supply chain, integration of sustainability is not only a question of personal viewpoint, but a differential. Especially, in Brazil, where the market is sparsely populated with certified timber for instance, the FSC label on a product is a value-adding criterion. As Nina Braga from Instituto-e states, who is a sustainability consultant for Osklin, one of Brazil's most luxurious fashion brands, "it is the new luxury" (personal communication, July 23, 2015). The fact of the matter is that many companies sourcing from the Amazon, either fully or partially rely on socially and environmentally sound practices and integrated management to warrant equivalent or higher prices. The higher price point is particularly difficult to convey, given the fact that products sourced from the Amazon suffer from an extremely poor reputation against the backdrop of deforestation, which if successfully done, not only increases the value of tangible inventory, but also the monetary value of intangibles (*The Amazon Under Debate: Opportunities, Challenges and Solutions* 2010).

Interest of our shareholders and clients in sustainability

What all these brands have in common are shareholders and customers that see quality of the product as inseparable from environmentally and civically responsible governance. Veja exemplifies this perfectly, in that it operates in a field, dominated by multinational competitors like Nike, New Balance etc. that largely use petrochemicals to manufacture their shoes. These are possibly similar in tangible quality, but customers are enticed by the uniqueness of materials, like wild Amazonian rubber in their soles, recycled PET bottles used to make the mesh of the sneakers, and comparatively low output numbers of approximately 120,000 pairs

[38] This constitutes an amendment to the Performance Framework, in that it does not distinguish between internal and external drivers, but instead consolidates these two driver categories and replaces the second category "external" with barriers to business sustainability in the Amazon.

[39] The decision to include CDSA was based on the missing questionnaire by VEJA, following the initial interview.

annually. Similarly, PW and its flagship the FSC label, along with good market positioning in terms of high-quality tropical wood, relies on the fervour of customers and shareholders for sustainably-sourced wood. In fact, its shareholders represent a growing segment of investors that subscribe to principles of responsible investment. Marzari contends that "they need to have a special flair for it, they need to like the idea of doing something good, otherwise you won't find an investor that will commit money to the cause voluntarily" (personal communication, July 16, 2015). This is to say that fast returns for investors are hard to come by in the Amazon. Operations in the Amazon are usually arduous due to institutional ineffectiveness and inefficient labour.

Possible future legislation regarding new sustainability issues in the Amazon

To a certain extent, companies are also driven by the possibility of being implicated in the shaping of future legislation, conducive to the sector at large. While some companies are simply too small to amend legislation or contribute to the introduction of new legislation, companies like Natura—in conjunction with state institutions and NGOs—wield the power to instigate such processes. Most companies, however, including Veja and Precious Woods are at the mercy of legislation. Many companies are subject to legislation that illustrates many shortcomings, in part because they are generically drafted in Brasilia without considering stakeholders and their issues on the ground, ultimately detracting from efforts to build a sustainable and profitable forest economy. One such example is showcased by Precious Woods, that was contingent on a law by IBAMA, positing that 50% of a log needs to be converted into wood boards, when the company could only covert 32% at best into boards and burn the rest as biomass (personal communication, Christian Marzari, July 16, 2015). In this case, the law neither accounts for fluctuating forest quality between states like Pará and Acre, nor does it account for other realities on the ground, like beetle infestations.

Therefore, a number of beyond-compliance companies in different sectors are driven by the opportunity to expose the absurdity of certain legislation and contribute to the amendment of laws. In the same vein, an emphatic theme throughout the industry relates to access to biodiversity, which has often been an arduous process characterized by complexity and slow bureaucracy. Companies like Natura have been hugely influential in spearheading initiatives towards this end, which materialized in the formation of the *Coalizão Empresarial pela Biodiversidade* (Business Coalition for Biodiversity).

The private sector has the power to put an end to deforestation in the Amazon

This point has been hesitantly agreed on by all three participants, claiming that the private sector has a role, but only in collaboration with a proper legal framework and government assistance, enabling the private sector to unfold its full potential. Also, in order to supplement demand for sustainably harvested products, much like state subsidies for green energy in the initial stages, governments need to demand products made according to principles of social biodiversity for instance, comparable to green subsidies to kick-start desirable developments. In a similar vein, many companies—although well intentioned—capitalize on production and extraction of low-value raw material, with little relevance to the community and economic development in the area (personal communication, Dande Tavares, August 07, 2015). The showcased companies, on the other hand, are devoted to expanding their value chains in the Amazon as much as possible through new technologies, training and physical infrastructure.

Our business has the ability to raise living standards in the Amazon

Inseparable from the private sector's role in halting deforestation in the Amazon—and possibly more scalable within the sphere of influence of companies sourcing from the Amazon— is the belief in their capacity to elevate living standards in the Amazon. A widespread belief is that companies have the ability to send the right signals, in showing the potential for employment in the agroforestry sector for instance and in diversifying value streams. Concomitantly, they can manifest long-term economic development through education, physical infrastructure and locally harnessed and produced knowledge. Elevated living standards are seen as the key to strengthening the business climate for companies like Natura, PW and Veja in the long run. Vocational education, tailored to the realities of the Amazon for instance, not only has the ability to instil appreciation for surrounding biodiversity and long-sightedness in people, but also creates a more employable workforce locally. In turn, an economy of and for the rainforest can become at least as competitive as an economy based on deforestation.

We believe that the Amazon brings profitability to our business/ or has huge financial potential in the future

This criterion was also not answered without reservations, as various accounts point to a rocky road on the way to making business operations in the Amazon profitable. Businesses like Natura for instance exemplify larger diversification potential in terms of products that do not rely on inputs from the Amazon, which makes it easier for the company to fall back on other sub-brands, if a crisis hits its Amazon operations. Similarly, the company has more capital available to cover local infrastructure expenditures and bring the supply chain up to speed. Companies, such as PW by contrast—smaller in scale— almost completely rely on Amazon inputs, to generate value. Along with the adherence to the FSC label and the higher cost structure, it is dependent on an appreciative clientele that is willing to pay a premium associated with sustainably-sourced wood. Veja, with manufacturing costs often three to four times higher than its competitors, relying on sweatshop labour and petrochemicals, can only offer sneakers at the same or a higher price point due to a *no-advertisement, no-stock* policy. The adherence to genuine sustainability practices along the supply chain—whether fairly remunerating *seringueiros* in the Chico Mendes Reserve in Acre or building and constructing an on-site factory to localize the value chain— have the potential to become a differential, attracting higher paying customers. However, it is not entirely possible to depend on the ethos of a brand to drive profitability of products from the Amazon in the long run, with comparably less expensive substitutes available on the world market. Essentially, three conditions are necessary to create a breeding ground for successful TBL businesses in the Amazon: first, governments, much like a subsidy, need to demand products and services based on the social biodiversity in the Amazon, e.g. the purchasing of preservatives from Natex[40], the main supplier of Brazil's Ministry of Health; second, a legal framework that reflects the reality on the ground; third, more state involvement in expanding necessary infrastructure.

Pressure from customers

Pressure from customers is a salient driver for companies at large, prompting product adjustments, change of governance and in some cases, even corporate survival. Businesses that are dependent on biodiversity inputs from the Amazon are no exception, as seen in the uniform responses. However, the demand for biodiversity products from the Amazon does not completely subscribe to the same rules as supply and demand in a business-as-usual scenario. Pressure mainly comes from an educated clientele that has enough conviction to purchase sustainable biodiversity products for perceived heritage and associated positive socio-environmental impacts. On the other hand, many companies in this economic segment

[40] Natex is a manufacturer of preservatives, made from natural rubber in the State of Acre in the south-western part of the Amazon.

spend a great deal on educating customers not through advertisement per se, but through subtle actions like environmental tables on packaging in the case of Natura or the promotion of slow fashion and sustainable consumption, practiced by Veja. Price elasticity of demand plays an essential role in this context, largely due to substitutable, cheaper products. In the case of PW, the differential is the chain of custody associated with the FSC label and an extensive portfolio of exotic woods. Ultimately, the survival and thriving of this sector is dependent on the companies' capacity to educate and reach as many consumers as possible, especially those of competing products. Similarly, companies like Veja contend that people need to be attracted by the stylishness and quality of the product in the first instance and its socio-environmental attributes in the second instance.

Improvement of internal and external communication

Improving internal and external communication is essential when it comes to operationalizing sustainable governance and initiatives, which two of the three respondents agreed on. From a practical point of view, good internal communication, ensures adherence to the highest socio-environmental and quality standards, while eliminating risks and inefficiencies in the supply chain, a point that cannot be highlighted enough in the rainforest economy of the Amazon. Observed efforts to foster internal communication ranged from all-encompassing communication channels like an ombudsman service and employing social workers and confidants to the use of endomarketing and technology like tablets to spot and communicate inconsistencies in the supply chain. This enables better monitoring and surveillance internally, an imperative part in conveying the veracity and integrity of the "Amazon brand" to stakeholders. Concurrently, open external communication, using comprehensive sustainability reports like GRI, openly available indicator sets and special packaging labels, are equally important for these companies in making sure that products and actions meet stakeholders' expectations. In turn, this provides the rationale for companies openly communicating vulnerabilities and shortcomings because many stakeholders in fact, are oftentimes more interested in the wellbeing of the rainforest and its inhabitants than in the tangible attributes of the product (personal communication, Nina B. Almeida, July 23, 2015).

Improvement of resource efficiency in the Amazon

Improvement of resource efficiency is an explicit and often self-evident driver for companies profiting from biodiversity inputs and a standing rainforest. Efficiency-enhancing life-cycle approaches, like eco-design and eco-efficiency by Natura illustrate the presence of this driver companywide. However, non-timber products, e.g. wild rubber and essential oils from plants are less affected by resource efficiency, attributable to their relatively low impact when sustainably managed. In fact, increasing non-timber, biodiversity products and discovering new uses, i.e. Natura's commitment to increase Amazon-derived biodiversity inputs by 30% by 2020 and Veja's emphasis on increasing organically grown cotton in the Céara[41] region etc., are prioritised. Certified and sustainable timber products by contrast, exemplified by PW, accentuate resource efficiency as the single most important principle. Apart from the rigorous stipulations for forest management by the FSC label and restrictions imposed by IBAMA, improvement of resource efficiency is also governed by commercial standing-tree volumes measured in $m^3.ha^{-1}$ and set-aside quotas for conservation purposes (de Graaf & van Eldik, 2011). The most illustrative action of resource efficiency by PW was the company's construction of its wood-fuelled power station that burnt sawmill rejects, not only ensuring that lumber is used in its entirety, but that electricity is commercially sold and carbon offset certificates are generated in the process. Sustainable timber-producing companies in the

[41] Céara State is not part of the Amazon region, but has been included due to its thematic proximity and similar stakeholders that are affected.

Amazon—unlike non-timber-producing companies to a large extent— with legal, institutional and conduct-related boundaries, are thereby much more affected by this driving principle.

Being ethical and green is the inherent mission of our company

Examined companies, strongly affiliate with this credo as a driver for their governance and actions overall, and in the Amazon. Although formal reporting schemes like GRI and recognitions like the B Corp certification are persuasive in speech, this driver is only one component of companies' value propositions. All companies explored here exhibit a proclivity for actions that maximise the benefit of direct and indirect stakeholders; for instance, the supporting of structural projects like vocational education benefiting the Amazon region at large by Natura, or the cutting of marketing expenses in order to provide fair remuneration of small-scale producers in the case of Veja. Empirically, the extent to which and the breadth of external stakeholders benefiting from ethical and green guidelines, put forward by these companies, is largely dependent on their scale. Natura, for example, has the popularity and financial stature to engage in political discourse and rally other institutions, to change customers' attitudes, and to regularly pioneer new processes and products. Relatively small players, by contrast, like Veja and medium scale companies like Precious Woods, are chiefly exacting these guidelines in the domains directly affecting their operations. However, when considered in the grander scheme of things, all companies, irrespective of scale—having fully committed, or partially committed a share of their sales to sustainably derived inputs from the Amazon— subscribe to and practice eco-ethics in interacting with the region, contributing to the future of a rainforest economy.

5.2 Assessment of barriers to sustainable business in the Amazon

This section takes up ancillary *research question 2b): What factors inhibit the expansion of sustainable business operations in the Amazon and how do they affect beyond-compliance businesses?* The selection of barriers is premised on the responses previously chosen by selected participants and given context by interviews and empirical evidence. For full disclosure of all barriers, refer to appendix 7.7.1.

The notion that harmful activities are more profitable

Although there is not a complete consensus amongst survey participants, judging by the disagreement on the part of Precious Woods, there is a rather overwhelming consensus among producers of non-timber products, experts and scholars that economic opportunism is the fault line between deforestation and a standing forest. Upon review of the three companies' operations in the Amazon, it becomes fairly obvious that developing the Amazon sustainably is costly, attributable to cumbersome logistics, shortcomings in institutional and physical infrastructure and adverse legislation. Land conversion for agriculture, particularly for cattle pastures and formerly soy production, is the single most destructive activity—with crop farming and timber production only accounting for marginal deforestation—for good reasons. Given the low market prices for commodities like natural rubber and unsustainable rubber-harvesting practices in countries like Malaysia, let alone the failure to value ecosystem services, cattle ranching remains more profitable. Also, most deforestation is perpetrated by small-scale farmers rather than large producers, attributable to, as most interviewees claimed, what was due to an opportunity for small-scale farmers to transition from subsistence farming to profitability. Most farmers are even aware of the socio-environmental and economic value of the Amazon region in the long run, but given the harsh realities on the ground and above-average family sizes that need to be sustained, land conversion for cattle ranching might be their only opportunity to attain wealth in the foreseeable future (personal communication, Dande Tavares, August 7, 2015). In not being part of sectorial certification schemes and an array of commodity-

related illegalities that are difficult to spot by authorities, unsustainable and oftentimes illegal products like uncertified timber and beef products more often than not, outcompete sustainable alternatives.

There are inadequate job opportunities for locals to earn enough money to sustain their livelihoods

Analogous to the previous point is the issue of fewer job opportunities available to locals, which all three respondents agreed, poses a considerable problem. This situation is indicative of a socio-economic deadlock, with an economy in the Amazon predicated on more readily available jobs in the extraction of low-value resources, like rubber and jute on one hand, and better-paying jobs, requiring a higher level of education like researchers, engineers and biologists, on the other hand. However, very few locals have access to these jobs, mostly because of the absence of proper education at the base level and poorly articulated policies, strengthening science, technology and innovation (S,T&I), affecting the post graduate level. The urgency of these aspects, has for instance inspired Natura's Amazonia Program. Although excellent university programmes do exist at Amazonian universities and initiatives have been instigated by some of Brazil's ministries, the disparity between Amazonia's residents and the rest of Brazil is very high in terms of HDI and investment in the research and education sector. This in turn makes people, by and large, only employable in low-paying extraction jobs, unless ethical companies like Veja commit to paying higher wages and creating value-adding opportunities, demonstrated by implementing the FDL technology. These sobering realities push many locals into the harmful economy, based on deforestation and degradation.

There are not enough (perceived) added-value activities that make it worthwhile to establish a business venture in the Amazon

The respondents agreed that businesses and investors alike are overall reluctant to put money into setting up business operations in the Amazon based on biodiversity inputs, unless they are driven by socio-environmental conviction, idealism and are forbearing. With the current status quo, raw materials by default, generally have no noteworthy exchange value in conventional markets (personal communication, Dande Tavares, August 7, 2015). Inhibiting government policies, neglect and corruption, resulting from Brazil's notorious bureaucracy, further detract from establishing value-adding operations in the Amazon.

6 Discussion

This chapter will provide a discussion of significant findings resulting from previous chapters, while delineating the relevancy of this study. Furthermore, it will examine the applicability of the employed methodology and present ideas for future investigation.

6.1 Discussion of findings and results

This study was performed, using a modified version of the Performance Framework. *Research question 1* was answered, using nine strategic objectives and corresponding performance references, and adapting these to the local context. Secondly, *research question 1* illustrated the connection between stated socio-environmental objectives, conducive to financial value and correlating these to strategic socio-environmental initiatives, measurements and achievements, using a variant of the Balanced Scorecard. *Research question 2* was answered by defining a set of drivers supportive of and challenges relating to the spread of sustainable business in the Amazon, based on a rainforest economy. The methodology was beneficial in that it provided flexibility and leeway to accommodate anecdotal and empirical evidence, while translating this information into standardised corporate socio-environmental initiatives in a business-as-usual scenario. Upon examining different companies' on-site operations and context-related corporate governance aspects, in conjunction with contextual macro-political and economic considerations, it became discernible that the impetus for a sustainable and value-adding rainforest economy is, in the first instance, provided by the private sector.

6.1.1 Benefit-sharing was significant amongst stated companies

In accordance with the stakeholder approach, highlighted in this thesis, it was found that companies were consistently pursuing varying degrees of operational and managerial strategies that resulted in socio-economic benefits, accruing to a notable amount of direct and indirect stakeholders, e.g. rubber tappers, local farmers and communities in the region. In doing so, stated companies, were directly addressing some root causes of deforestation and existing barriers to a sustainable forest economy. Contextual aspects of examined companies, such as company size, operational complexity, sectorial popularity, variety and amount of biodiversity inputs of on-site operations, had a strong bearing on the breadth of strategic socio-economic and environmental on-site initiatives, leading to regional benefits.

Natura, for instance, as a popular Brazilian multinational with an array of sub brands, including its Ekos line—reliant on Amazon inputs—was found to be well positioned to exact influence in many relevant domains, such as broad-spectrum education, institutional development and reinforcement, job creation and research and development. Entire product lines like the 100% *AMAZÔNIA* soap within the Ekos brand, for instance, serve as a lens through which such broad-spectrum benefit sharing is exemplified. It provided the impetus for a local state-of-the-art soap factory that has prompted an increase in social biodiversity ingredients being used, bringing financial and social benefits to surrounding communities through increased employment opportunities in Benevides, Pará, while mitigating environmental impacts. This has enabled local suppliers to not only supply the ingredients, but also to become engaged in processes, previously outsourced to third parties outside of the Amazon. As part of the Amazônia Program, spanning three pillars, namely *Science Technology and Innovation*, *Sustainable Production Chains* and *Institutional Reinforcement*, the Ecoparque industrial park has also incubated local entrepreneurship and joint projects with other partners like Symrise, an international producer of fragrances and raw materials (Behar 2013). With select companies participating in the Ecoparque project, Natura expects a sustainable

economy to develop based on forest inputs, infusing the region with further knowhow, infrastructure and local employment opportunities. This illustrates the point that an increase in complexity and diversity of raw material and human input is positively correlated to positive spinoff effects to the region. This means that sectors, particularly the cosmetics and pharmaceutical industry, can not only influence factors directly linked to the extraction and production process, but also to peripheral circumstances required to develop biodiversity inputs.

The legal timber industry, represented by Precious Woods in this thesis—although less dependent on elaborate research facilities and post-graduate infrastructure on-site— can be hugely influential in expanding the range of stakeholders benefiting from environmentally sound logging operations in surrounding communities. By default, FSC guidelines already require a more sophisticated and transparent process and above all benefit sharing with local and indigenous communities, which covers the institutional perspective. From a practical point of view, sustainable forestry also requires technical skills, ranging from fundamental silvicultural knowledge and technological skills like GPS tagging of tree inventory in the case of PW, to technically and environmentally sound knowhow like cutting double girdles by chain saw, instead of using pesticides to kill undesirable trees. In light of the generally lower HDI in the Amazon, entailing deficient education, these operational processes, compared to unsustainable and illegal operations, require learning of skills and vocational education, which deliver an avenue to create a more skilled and employable workforce locally.

Also, given the difficulty of remaining profitable, due to unfair competition, bureaucratic and context-related hurdles, as well as fluctuating wood prices, timber companies need to diversify revenue streams. This is made clear by PW's biomass plant that provides clean electricity and energy security to 40% of Itacoatiara's inhabitants, while offsetting CO_2. Beneficiaries are therefore local residents and society at large. In contrast, illegal and invasive logging operations primarily benefit the perpetrators, and sometimes even severely maim surrounding residents, like indigenous people, who see the quality of surrounding forests and hence their livelihoods deteriorate through incursions. Armed standoffs between loggers and indigenous people over land, an alarming rate of targeted assassinations[43] of environmental activists in the region, and squandered state-resources to investigate these rarely solved murders, are an indication not only of virtually absent benefits, but an increased burden on Brazilian society.

Similarly to PW, Veja—while not having exclusive employees—is able to increase added value to production processes like rubber tapping. Its "zero-stock" and "zero-advertisement" policy compared to larger incumbent brands like Nike and New Balance, can be credited for increased wages for workers and income for their families, remunerating processes that create real capital. While this is a policy applied to multiple production sites in Brazil, including rubber tappers in Acre and cotton growers in Céara State, smoked liquid sheets (*Folha Defumada Líquida* or *FDL*)— much like Natura's Ecoparque industrial park—is an innovation initiative that has brought more value to locals, who can process the rubber into sheets on-site that are then sold to manufacturers such as Veja. Due to the fact that the technology does not have a copyright, locals can also use it to produce other rubber-based commodities, redirecting attention away from harmful to sustainable activities.

[43] For further reading on assassinations due to land disputes and illegal logging see

Assassinations of Environmentalists Continue in Brazil's Amazon, Deforestation Rises. (n.d.). [Web page]. Retrieved from news.mongabay.com: http://news.mongabay.com/2011/05/assassinations-of-environmentalists-continue-in-brazils-amazon-deforestation-rises

Assassinations in the Amazon: How Will Peru Respond? | David Hill | Environment | the Guardian. (n.d.). [Web page]. Retrieved from www.theguardian.com: http://www.theguardian.com/environment/andes-to-the-amazon/2014/sep/13/assassinations-amazon-peru-respond

6.1.2 Private-sector collaborations with state institutions, ministries and NGOs were found to address many urgent regional issues

It was noticeable that examined companies were seeking the exchange of information with, and assistance of peripheral actors and sometimes inter-business cooperation in addressing some of the urgent problems facing the Amazon today. Similar to the previous point, the extent and diversity of collaborations seems to be dependent on factors like complexity of operations, i.e. the need for additional R&D infrastructure to make ingredients employable. Additional factors making this conclusion plausible entail the level of dependency on socio-economic infrastructure and public policy relating to the legal Amazon, e.g. education, the biodiversity legal framework and conservation.

In companies that showcased less complex operations, cooperation was usually confined to the supply-chain level, where companies sought the expertise of NGOs that acted as liaising partners. In the case of PW, Marzari stated that NGOs and architects are influential in establishing the relation between the marketability and employability of exotic woods in different countries on one hand, and sustainable harvesting practices, congruent with best silvicultural practices on the other (personal communication, July 16, 2015). Similarly, Veja consults ESPLAR, an NGO based in Fortaleza, the capital of Céara State, to help implement agro-ecological farming systems.

Some collaborations, however, emanate out of necessity, due to adversarial, contextual conditions that can jeopardise operations imminently or hamper innovation and business continuity in the long run. Legal and beyond-compliance businesses in the Amazon are overwhelmingly found in this category, attributable to their exposure to Brazil's lagging bureaucracy and obscure legal system. PW, especially in the past, was highly dependent on attaining timely harvesting permits, to proceed with harvesting trees during the dry season. Due to the slow processing of these requests that had the potential to severely threaten its profitability, the company was in a continuous relationship with IBAMA to attain temporary permits, or alternatively had to leverage political contacts to expedite processing of such permits (personal communication, Christian Marzari, July 16, 2015). Natura, whose imminent operations are not threatened per se through slow-moving institutional proceedings, has joined a collaboration with a conglomerate from the same sector, entitled the Business Coalition for Biodiversity (Coalizão Empresarial pela Biodiversidade), to deliver a proposal to the Ministry of Environment to amend the biodiversity legal framework. It governs access to biodiversity, which has been made responsible for excessive red tape and impeding scientific and technological development with its mandatory prior-authorization mechanism (2013).

All examined companies recognized that continuity, expansion of sustainable business in the Amazon, and safeguarding of "the Amazon brand" rested on the ability to address socio-economic and environmental issues to the largest extent possible. This acknowledgement often catalyses collaborations that go beyond short-run business priorities. While companies like PW take an informal approach in addressing critical on-site issues like conflict management, health care (including birth control, AIDS/HIV), communication skills, and elementary and vocational education, companies like Natura work closely together with government ministries and NGOs in tackling socio-economic and environmental problems. In the sphere of education this is showcased through a collaboration between the Instituto Natura, with Pará's state department for education, Brazil's Ministry of Education and the NGO Gestão de Interesses Públicos (GIP), to improve Pará's educational performance index, school infrastructure and competencies of teachers. The Alternating-Schools project[44], a joint

[44] In this model, the student attends school for 15 days and on the other 15 days of the month applies the knowledge acquired in his/her local community. The model is put into practice by 24 alternating education institutions known as the Casas Familiares Rurais do Pará (CFRs), by the Ministry of Education and State Education Council. In 2013, 2300

project of Natura and GIP, can be seen as a very concrete example, addressing educational needs, while providing value-adding skills to surrounding communities. Another noteworthy cooperation was the company's funding of a study on the economic costs of the loss of biodiversity[45], with the NGO Conservation International, which coordinates the TEEB (The Economics of Ecosystems and Biodiversity) movement.

6.2 Assessment of the significance and implications of the research

The relevancy of this research and the commensurate research questions were legitimate, given the fact that to date there has been no comprehensive study on integrated business models and how these can help to alleviate some of the most acute socio-economic issues in the Amazon, while illustrating the potential financial benefits. In recent years a lot of attention has been given to institutional approaches, including REDD+, the Amazon Fund, and miscellaneous other public policy approaches to redress deforestation and concomitant problems. While partially successful, very few of these approaches tackle socio-economic problems leading up to financial opportunism. Although the study is not generalizable in every respect, mainly providing snapshots of integrated business models and their interaction with the contextual aspects of the Amazon, a high level of unanimity and generalizability was discernible relating to drivers of and barriers to triple-bottom-line businesses in the Amazon. By establishing a nexus between business-as-usual benchmarks and the Amazon context, this study is likely to engage a number of actors in the private and public sector.

Incumbent businesses that are currently pursuing a beyond-compliance or sustainability path might be better able to gauge the connection between well-established business objectives, conducive to the triple bottom line, for example, eco-efficiency and eco-ethics, concrete business initiatives and external aspects that are abundant in the Amazon. In a similar vein, future entrepreneurs interested in starting a sustainable business venture in the Amazon, might be able to avert certain problems and unlock opportunities by using a similar approach to assess akin companies.

Policy makers in Brazil and other Amazon countries should consider reviewing this study, to amend laws in favour of concurrent and future businesses, relying on biodiversity inputs for their produced commodities. This applies particularly in the context of red tape, which often hits beyond-compliance businesses particularly hard, as budgets for compliance with existing laws and regional development are tightly calculated, with a very small margin to remain profitable. For policy makers, this study should draw attention to designing meaningful laws to protect the rainforest and to assist these businesses, rather than creating laws that add unnecessary bureaucracy, inflate expenses and impede day-to-day operations of environmentally and ethically sound companies. Similarly, ministries, state institutions, and non-state actors might find this study valuable, when seeking collaboration opportunities with on-site companies with respect to topics like education that have potential to yield fruitful relationships.

Within the context of a capitalist paradigm, this study advances the idea of "fighting fire with fire", i.e. that the financial imperative prompting rainforest inhabitants to deforest and degrade forest land, needs to be met with a sustainable alternative that is at the very least equivalent in profitability. In order to achieve this new reality however, especially scholars involved in the

students were enrolled and funding to insure the continuity of the project was to be provided from 2014 onwards (Behar, 2013).

[45] Although this collaboration serves as a precursor to address a problem in the raw materials chain and supports the development of the company's novel ESP&L accounting, the knowledge generated will be available to the public

domain of payments for ecosystem services should consider that—although important in the long run—PES adds a level of complexity that is simply not practical in the day-to-day life of an Amazon resident, who is fending for financial subsistence in an environment where necessary commodities like gas[46], are substantially more expensive than in wealthier parts of Brazil.

6.3 Reflections on the usefulness of the research methodology

Overall the research methodologies proved effective in establishing a connection between formal and generic criteria, and contextual information. While the framework was slightly adjusted to be in conformity with a case study approach, as opposed to a survey-like study, employed by Dias-Sardinha & Reijnders, the model was effective because it met the desired outcome to provide a comprehensive overview of the companies' internal operations and its engagement with the Amazon. The main strength of the framework is that it juxtaposes the companies' strategic objectives with much sought-after issues, e.g. deficiencies in education, value-adding job opportunities and investment. Simultaneously, it delineates initiatives designed to deal with these issues, while providing evidence that these actions in fact have financial potential. In other words, this framework addresses the rift between what should be done versus what is actually being done.

In the author's opinion, the case-study approach was circumstantially sound, but also exhibited some weaknesses. It was able to capture contextual aspects and sometimes anecdotal evidence, imperative for illustrating companies' engagement with local realities and stakeholders, while showcasing an array of individual problem-solving approaches, adapted to business circumstances. Conversely, it did not achieve what Dias-Sardinha & Reijnders were able to do by surveying 13 companies, namely to attach a group of companies that indicated a specific business objective, like eco-efficiency or eco-ethics to a set of similar initiatives and achievements. Instead the reader is able to see the individual profile of a company. Company X, for example, is employing strategic objectives XYZ and is undertaking specified initiatives and measurements in the 4 perspectives of the Sustainability Balanced Scorecard. Also given that one of the companies did not respond to the questionnaire, it was not possible to complete the whole profile on the company. Thus, the author would advise future researchers to make it explicitly clear to the interviewees in advance that a semi-structured interview requires the questionnaire to be answered to complete the study; possibly, alternative interviewees for companies should be on hand.

The balanced-scorecard format, as part of the Performance Framework proved invaluable, as it provides the researcher or manager with leeway to tailor indicators within the four perspectives to the contextual environment the company operates in. In addition, it provides a more comprehensive picture of the company's operations, due to its ability to not only evince the connection of tangible aspects on the bottom line, but to also show how "soft" aspects—like companies' sustainability actions that are increasing workers' productivity— are affecting a company's financials.

In terms of the practicalities, two aspects proved to be of high value. First, colour-coding of performance references enabled companies to make more accurate statements in a standardised model. Also, in light of the use of a case-study approach, unlike the survey approach conducted by Dias-Sardinha & Reijnders, who investigated categorically similar companies, this method was congruent with the disparate nature of these companies. Second,

[46] For interstate gas prices in Brazil see http://www.anp.gov.br/preco/prc/resumo_por_estado_index.asp

LinkedIn, was a highly effective tool for profiling and making initial contact with appropriate interviewing candidates for this study.

6.4 Future research

This study served the purpose of illustrating how companies representing different sectors are using the free market as an avenue to bolster their financial bottom line, while at the same time contributing to a sustainable rainforest economy, based on social biodiversity. Given the novel adaptation of Dias-Sardinha & Reijnders's Performance Framework and first study of this kind in the context of the Amazon, it is the author's firm belief that more research can and should be undertaken on the role of the private sector in redressing the social and environmental ills of deforestation. The author is of the opinion that research could be extended to other companies in the Amazon beyond Brazil's borders as a conjunctive study.

Alternatively, future researchers could also examine types and volumes of sustainable biodiversity inputs from the Amazon with the greatest socio-economic and environmental impact. In keeping with the private-sector theme, future researchers should also direct their attention to indigenous agroforestry businesses that are sprouting out of the ground as communication technology improves and new markets develop.

7 Conclusion

The purpose of this study was to investigate sustainably-inclined companies in the Amazon Rainforest and the type of initiatives they are undertaking to remain profitable, while bringing developmental, socio-environmental and economic benefits to the region. In order to achieve this end, the research questions were phrased as follows:

1. *a) What strategic environmental and social initiatives and measurements are sustainably-inclined companies, sourcing from the Amazon Rainforest operationalizing, to achieve triple-bottom-line value in the given context and how can their actions be classified? b) What achievements can be attributed to these initiatives and measures in fulfilling the triple-bottom-line criteria (economic, social, environmental)?*

2. *a) What driving forces are there for sustainably-inclined business operations and are there identifiable patterns between different companies? b) What factors inhibit the expansion of sustainable business operations in the Amazon and how do they affect beyond-compliance businesses?*

In order to address *research question 1*, it was first necessary to characterize the context of the companies, and also to categorize them according to strategic objectives and in addition, according to value driver objectives, e.g. *eco-efficiency*, *pollution prevention*, *growth through sustainability-advantaged products*. This was done to understand where to situate these companies and to understand how socio-environmental initiatives and measurements link up with different objectives in some instances. Secondly, indicators within the four perspectives of the Sustainability Balanced Scorecard were employed, to show what the company is actually undertaking, complementing the picture of—in the first instance— notional corporate objectives. It was shown that well-sought after socio-environmental and economic aspects, oftentimes implicated in deforestation were addressed, with varying degrees of impact, depending on variables like the size of the company and complexity of operations.

In terms of the *strategic profile* of companies, it became apparent that the size of the company, complexity and extent of on-site operations played a crucial role in the number of applicable

strategic and value driver objectives, along with commensurate performance references. In the case of Natura all objectives were indicated to apply, with predefined performance references oftentimes explicitly articulated in the company's *Sustainability 2050 Vision* and a comprehensive GRI report. The company's sub-brand Ekos and the conjunctive Amazon Program are essentially representative of the company's governance of its Amazon operations. In connection with the company's performance evaluation, there were initiatives like the construction of its local soap factory that intersected with an array of objectives like *pollution prevention*, *eco-efficiency* and *performance-cost savings from sustainably driven productivity initiatives*. Thus, although the company's former CEO Alessandro Carlucci issued a statement that he does not consider the company sustainable, the company displays sustainability and hence triple-bottom-line management by the conditions defined in this study.

Precious Woods, a Swiss timber company, operating in the region, exhibiting a relatively low level of complexity, agreed with 4 of the strategic objectives and with *growth from sustainability-advantaged products* within the value driver objectives. The company uses the FSC label as a vehicle to convey its value proposition and promise of sustainably sound forestry in the region. *Pollution control/regulatory compliance* and *pollution prevention* can be seen as one of the company's differentials in the given context, where illegal and invasive logging is the rule. A highlight of the company's performance evaluation was the company's local, co-owned biomass plant that overlapped with a number of indicated performance objectives and also showed promising effects on the company's bottom line in terms of *performance* and *growth*.

Veja, the French sneaker brand headquartered in Paris, sources all materials and human capital to produce its shoes from Brazil. Although no explicit data were provided on its objectives, because the author was not able to attain a completed questionnaire following the interview, the author conjectured that the company is aligned with objectives like *eco-efficiency*, *eco-innovation*, *eco-ethics* and most likely, *sustainability*. The flagship of Veja's Amazon operations, which also has the greatest overlap with a number of stated objectives, is its use of wild rubber and the on-site production of rubber sheets in the production of its soles. The positive benefit-sharing effects are amplified by the company's decision to employ a zero-advertisement/ zero-stock policy, whereby the company is able to channel more benefits to its suppliers in the Amazon and elsewhere in Brazil.

Pertaining to *research question 2a),* thirteen drivers for sustainable business in the Amazon were identified with varying degrees of relevancy between the three respondents Precious Woods, Natura and CDSA. *Our business has the ability to raise living standards in the Amazon*; *the private sector has the power to put an end to deforestation in the Amazon*, were regarded as the most noteworthy.

With regard to *strategic comparability within the industry,* it was made evident that the companies' social and environmental practices were sound, and not only seen as an imperative to maintain legitimacy within a highly scrutinized context, but also as a strategic differential. Essentially, verified adherence to strong socio-environmental principles in the Amazon, allows brands to charge equivalent or higher prices on its commodities than akin companies with lower convictions. In accordance with the theme of this thesis, respondents believed that *businesses have the ability to raise living standards in the Amazon* by diversifying value streams, providing the impetus for long-term economic development and by supplying the foundation to produce new knowledge, while harnessing traditional knowledge.

Summing up, in order to make local people more employable and to increase margins based on locally sourced biodiversity inputs, companies are investing in physical and non-physical infrastructure, which results in benefits accruing to communities. Similarly, respondents saw *the role of the private sector to put an end to deforestation* as an important motive for expanding local business operations. In order to achieve this, it was maintained that companies needed to

focus directly on value-adding goods and activities in the region, similar to the examined companies. However, it was also highlighted that government assistance and a favourable legal framework were seen as indispensable in laying the groundwork for beneficial framework conditions.

In response to *research question 2b)* eight barriers to sustainable business in the Amazon were identified. Three barriers were agreed on by all three respondents unanimously, namely insufficient job opportunities for locals; *insufficient investment in Amazon;* and *not enough value-adding activities to encourage corporate interest*.

The problem of *insufficient job opportunities for locals* is attributable to the deadlock between low-extraction jobs that are more readily available and higher paying research jobs that often require a university education. The lack of education at an elementary level, let alone at the post-secondary level, has however, created a condition were the Amazon region's HDI ranks a lot lower than in the rest of the country. Oftentimes, poorly articulated policies to strengthen S,T&I or simply insufficient government funding are complicit factors in this issue, barring many people in the region from entering meaningful jobs. Corresponding with insufficient job opportunities, is the perception of conventional entrepreneurs that there are *insufficient added-value activities* to encourage interest, in part due to the absence of framework conditions or the presence of bureaucracy and corruption. This partially feeds into the issue of *insufficient corporate investment*. Many investors are simply reluctant to invest in sustainably-inclined ventures in the Amazon under normal circumstances, due to the adverse conditions found on site, some of which are natural, like the rain and dry season and some related to the institutional sphere. In any case, many interviewees agree that quick returns on investments are difficult to come by.

The *stakeholder view* of the company, as opposed to the notion that companies are in the service of society, displayed a high degree of efficacy in analysing an environment like the Amazon. This is attributable to the fact that stakeholders—such as river dwellers (ribeirinhos) and indigenous groups—have many grievances that can affect, especially, beyond-compliance companies in their operations. In this view, it was also shown that examined companies exhibited a collaborative demeanour. The companies were not only found to be working together with institutional actors like ministries, universities and NGOs, but also with the local population. In employing non-discriminatory input rules and grievance mechanisms, companies were better equipped to deal with local issues. This approach, thereby combined a bottom-up/bottom-down approach with a participatory view.

This thesis made an attempt to present two sides of the same coin. On one hand, its purpose was to show what examined business are doing, in order to remain profitable in a complex environment like the Amazon; on the other hand it tried to exemplify what selected companies are doing to tend to the three pillars needed to contribute to an economy based on an alive forest, which are macro issues. First, all three companies designed their actions around the idea of *multiple uses of the forest,* entailing timber and non-timber products, biodiversity protection, the acknowledgement of forest services and the promotion and support of these services. A number of initiatives taken by individual companies were congruent with what experts prescribed to achieve this end, namely the use of agroforestry techniques, technical innovation and recovery of degraded and deforested land. Second, studied companies put into practice the recommendation of *enhancing the local value chain*, mainly by insourcing many activities through technology, infrastructure and focus on local knowledge creation. This is also echoed in the notion that Brazil's technical infrastructure and knowledge from other temperate forests have the potential to achieve this end. Lastly, the companies were also indicative of operationalizing initiatives that testify to *social inclusion*. This involves activities that bring people up to speed in terms of vocational training and education; and undertaking initiatives that connect forest people to the rest of the country.

Although this research presented a comprehensive way of viewing the complex interplay of a sample of beyond-compliance companies, this study only provides a small snapshot of the intricate business environment, as illustrated in the Amazon. Since the Amazon has mainly been researched from a macro and institutional vantage point, it would be worthwhile to dedicate further studies to a larger selection of companies. Furthermore, future researchers might be interested in examining the socio-environmental impacts of commodities based on agroforestry. This could be of particular interest, given the fact that an increasing number of indigenous communities—enabled through better connectivity— are establishing businesses based on agroforestry.

Finally, it is the author's hope that this thesis was able to spark the reader's interest in the "Amazon brand". With consumers becoming more conscientious of what they buy and the perception that quality is not only a matter of good workmanship, but also of environmentally and civically sound products, goods from the Amazon have great potential to becoming a market differential. Unlike anonymous products that are oftentimes produced, using cheap labour and generic materials, the "Amazon brand" has great potential to yield novel products that not only exhibit a high level of uniqueness and style, but can also contribute to creating a bulwark against destructive economic activity in the Amazon. Thus, the Amazon is an example of an area that still holds an immense capacity to innovate and also embody the case for a forest economy based on a standing forest.

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Appendix

7.1 List of interviewees

Table 11: Complete list of interviewees

Organisations	Interviewees	Quick description
Precious Woods Holding AG Zug, Switzerland	Christian Marzari	Former on-site manager of forestry operations in Itacoatiara
Natura São Paulo, Brazil	Iguatemi Costa	Mr. Costa was the former general manager of the Natura Amazon Innovation Center (NINA), where he developed strategies related to research and innovation in the Amazon region.
Veja Fair Trade S.A.R.L. Paris, France	Bia Saldanha	On-site operations Manager for Veja/Vert
Instituto-e	Nina A. Braga	Ms. Braga is a consultant at Instituto-e and responsible for sustainable sourcing from the Amazon region.
Companhia de Desenvolvimento de Serviços Ambientais de Acre (CDSA)	Dande Tavares	Mr. Tavares is the director president of CDSA, a public, private agency, located in Acre, Brazil. The agency is substantially involved in development issues in the Amazon.
Crenaque Tribe Advisor to Government of Minas Gerais for Indian affairs	Aiton Krenak	Mr. Krenak is a leader of the Crenaque Tribe, environmentalist, writer and special advisor to the Government of Minas Gerais for Indian affairs.
Rede Povos da Floresta	Joao Fortes	Founder of Rede Povos de Floresta (NGO) and co-founder of Treetap

7.2 Sample interview questions to companies and stakeholders

Companies

How many products or what percentage of products are sourced from the Amazon?

How many finished products do you have that contain products from the Amazon?

Can you think of an anecdote of an innovation you implemented that saved the company money, such as improving the fluency of your supply chain?

Who are your stakeholders and what are their interests? What drives you?

What is the main value proposition of your company to the customers?

Which indicators or ratio values would you say you employed to communicate the financial value of sustainability in the Amazon?

Is it possible to denote which share of your turnover is attributable to sustainability advantaged products?

Would you say that it is possible to point to company policies that had a sustainability connotation and that led to cost savings?

What would you say were the main concerns of stakeholders you interacted with? Were you implicated in resolving stakeholder issues?

Stakeholders

What issues or concerns do you bring up when working with companies or what issues are important to these companies that are addressed by external stakeholders such as your institute?

What would you say, from your perspective drives these companies? Is it pre-emption or legitimacy? In other words, are these companies taking a genuine interest in what happens in the future, a certain risk management or are they mainly driven by compliance and laws?

Would you say that companies sourcing from the Amazon take a genuine interest in working with non-governmental organizations, such as NGOs? What I mean are stakeholders that are not necessarily directly affiliated with the product.

What are some of the environmental aspects that they want to have highlighted? For instance, water conservation, the use of chemicals, emissions in the supply chain? Is there a company policy that highlights special aspects such as water conservation?

What are the core environmental and social issues/problems for indigenous people in the Amazon and how could businesses assist in solving these issues?

7.3 Questions to determine which strategic objectives and corresponding performance references apply

Table 12: Questionnaire Part 1with performance references partially colour-coded

1. Environmental Strategic Objectives and Performance References for Organisations	
Instructions: Please indicate in Column C (Validation), using the drop-down menu which of the following Strategic Objective(s) apply/ies/ does not apply to your organization currently and colour-code in column B which performance references you feel are most suitable to your organisation. ("Pollution control/regulatory Compliance") is the minimum, so if applicable a second strategic objectives should be marked in column C.	
Strategic Objectives	**Performance References**

Pollution control/ Regulatory compliance: Compliance with relevant regulations, voluntary agreements (such as covenants), and general codes of conduct voluntarily adhered to	No violations of regulations, voluntary agreements, and general codes of conduct voluntarily adhered to
Pollution Prevention: Optimization of resources consumption and prevention of waste (including emissions) during production and high negative-impact wastes, in line with financial targets of the company, such as cost reduction	Reference values of best preventive technologies and practices available to the sector Proactive attitude concerning future changes in the law Reduction of environmental burden, when compared with average company in compliance (normative) Procedural: effective management structure for pollution prevention, preferably following standards related to an EMS, with effective monitoring and information systems
Eco-Efficiency: Reduction of resource intensity and minimization of environmental impacts of production and products/services, together with value creation by continuous incremental improvement	Application of most eco-efficient practices, technologies, and products/services available, preferably using a product life-cycle perspective Measurable reduction of environmental burden, when compared with average company in compliance Value creation coupled with continual improvement Procedural: following standards related to an EMS
Eco-Innovation: Introducing radical environmental improvements pertinent to production, products, and services to achieve minimum environmental impacts, using a product/service life-cycle perspective	Use of predefined goals, e.g. 100% share of eco- innovated production and products,sector-leader achievements in eco-innovative markets, measurable reduction of environmental burden , when compared with average company in compliance (normative) Procedural: accountability for life-cycle impacts of products/services, preferably following standards related to life-cycle analysis (LCA) and eco-labelling

(Eco)-Ethics: Using environmentally related normative values (e.g. zero pollution) to guide organizational activities and emphasize social aspects	Specified principles (e.g. zero discharge, zero waste, use of only renewable energy) or general environmental decision-making based on ethical concerns Procedural: applying ethical requirements, preferably use of voluntary standards as guidelines, e.g. AA 1000 (AccountAbility, 1999), SA 8000 (SAI, 2000) Reporting, preferably applying Sustainability Reporting Guidelines requirements (GRI, 2000)
Sustainability: Guiding organizational activities by consideration of environmental, social, and economic justice between generations and with respect to contemporaries. In the case of environmental performance, this objective can be operationalized when organizational activities leave the environment no worse off at the end of each accounting period than at the beginning, complemented with environmental restoration or remediation when environmental damage is detrimental to contemporary generation.	Application of the Precautionary Principle (EEA, 2001) (when in doubt as to the long-term environmental and human safety of a product due to lacking data, your company won't allow the product to enter the market) Integration of all costs that are currently external into cost accounting (Total Cost Accounting) and achieving an acceptable profit while doing so Use of sustainably generated renewables in place of dissipatedly used inputs Reduction of environmental burden by up to a factor of 50 (Reijnders, 1998), if compared with average company in compliance (dependent on, among other things, the sector and assumptions as to overall production and consumption) Preventing negative product/service life-cycle related impacts on future generations Procedural: compliance with all pre-referenced standards. Integrated management of environmental, social, and economic aspects of triple bottom line by using an integrated management system (e.g. SIGMA Project, BSI, 2001). Involvement of and transparency to third parties (e.g. apply GRI, 2000)
2. Which classifications would you use to describe your company's strategies towards sustainability/environmental/social improvements that have been <u>explicitly</u> driving financial objectives?	
Instructions: In Column C, use the drop-down menu to check the applicable performance metrics for classifying initiatives in the Amazon and colour-code the applicable performance reference categories for implemented strategies in column B. Column D can be used for additional comments. (All three performance metrics can be checked if applicable).	
Value Driver Metrics	**Performance References**

Growth Revenue growth from sustainability-advantaged products, services and/or strategies (S/G)	**New markets and geographies** Expanding market share based on enhanced demand for sustainability-advantaged products **New customers and market share** Gaining sales to new customers and geographies based on brand and reputation for sustainability product leadership, especially where those attributes are differentiators **Product and service innovation** Developing innovative sustainability-advantaged products and services that better meet customer needs while minimising unwanted social or environmental consequences and/or enhancing desirable social and environmental outcomes **Long-term strategy** Implementing a long-term strategy and plan, along with the required investments, to deliver sustainability-advantaged growth
Performance Total annual cost savings (and cost avoidance) from sustainability-driven productivity initiatives (S/P)	**Operational efficiency** Operational efficiencies, resulting in cost savings and/or cost avoidance through better use of natural resources, reduced wastes and/or finding better alternative materials with lower costs and impacts **Human capital management** Reducing the cost of attracting and retaining top talent to the firm as a result of the firm's commitment to sustainability and the employees' perceived value of that commitment, as well as increased worker productivity due to skills and safety training, and inclusive and equitable work environments **Reputation pricing power** Margin improvement, potentially increasing price and volumes from customer perception of enhanced value from sustainability-advantaged products
Risk Management Reduced sustainability-related risk exposure that could materially impair a company's performance (S/R)	**Operational and regulatory risk** Decreasing levels of environmentally critical and/or constrained resource use; limiting business interruptions and risk of losing the license to operate; reducing emissions of key pollutants or toxins; and other areas that could expose the firm to regulatory actions or penalties, as well as increasing adherence to established sustainability-related operating standards, including results of related audits and certifications. **Reputation risk** Increasing assurance via assessments, audits and/or certifications that the firm's suppliers are providing reliable, responsibly produced products and services in accordance with the firm's policies, industry codes and international standards. **Supply chain risk** Decreasing exposure to reputational risks arising from a variety of actions including, fines, negative legal judgments, boycotts, public protests and/or negative media attention through implementation of proactive policy and procedures that limit the risk of social and environmental harm. **Leadership and adaptability**

7.4 Leading and lagging indicators

Table 13: Generic categories for the formulation of lagging indicators

Table 1. Generic categories for the formulation of lagging indicators (Figge *et al.*, 2001a; see also Kaplan and Norton, 1996)

Financial perspective	Customer perspective	Process perspective	Learning and growth perspective	Non-market perspective
◦ Revenue growth	◦ Market share	◦ Innovation process	◦ Employee retention	◦ Freedom of action
◦ Productivity growth	◦ Customer acquisition	◦ Operations process	◦ Employee productivity	◦ Legitimacy
◦ Asset utilization	◦ Customer retention	◦ Postsale service process	◦ Employee satisfaction	◦ Legality
	◦ Customer satisfaction			
	◦ Customer profitability			

Source: Figge, F., Hahn, T., Schaltegger, S., & Wagner, M, 2002

Table 14*: Generic categories for the formulation of leading indicators*

Table 2. Generic categories for the formulation of leading indicators (Figge *et al.*, 2001a; see also Kaplan and Norton, 1996)

Financial perspective	Customer perspective	Process perspective	Learning and growth perspective	Non-market perspective
–	◦ Product attributes	◦ Cost indicators	◦ Employee potentials	leading or lagging indicators from all other perspectives
	◦ Customer relationship	◦ Quality indicators	◦ Technical infrastructure	
	◦ Image and reputation	◦ Time indicators	◦ Climate for action	

Source: Figge, F., Hahn, T., Schaltegger, S., & Wagner, M, 2002

7.5 Performance evaluation of companies based on the Balanced Scorecard

7.5.1 Natura

Table 15: Natura's Performance Evaluation

Organizational level	**TBL**	**Stakeholders**	**Process**	**Learning**
Parent company	**Governance**			

	• Sustainability Vision 2015 covering many Amazon-related aspects on materiality • B Corp • GRI • ISO 14001 (EMS) • Evaluation of socio-environmental externalities (planning stage)			
	Compliance			
	• Compliance with legislation and clear articulation of mitigation strategies in EMS (e.g. mitigation of CO2 through REDD+ projects in Amazon) • Liaising and consultation with federal and state gov.			
	Social and environmental issues			
	• Environmental and Social Profit and Loss (ESP&L) • Ombudsman service • Materiality • Eco-Design • Carbon and Waste accounting throughout supply chain			
	Financial (RG) (PG) (RM)			
Site	**Financial (Direct)**	**Community relations**	**Management, operations**	**Employee potential/education of relevant stakeholders**

	• Turnover goal in the Pan Amazon (millions of R$) 582.1 of 1,000 reached in 2014 since 2010	• Inclusion of agro-extractivist communities benefit sharing based on access to genetic heritage and associated traditional knowledge, support through goods and services sourced from region (social biodiversity) • Goal to include 10,000 families from Amazon in value chain (2,106 to date) • Relevant network indicators relating to supplier communities in Amazon, e.g. human and social development, social biodiversity strategies **(RM)** • BioQLICAR - which stands for Quality, Logistics, Innovation, Competitiveness, Environmental, Social and Relationship adapted **to** the realities of supplier communities	• Construction of Ecoparque in Pará, soap factory to streamline processes/more value- adding activities for company and suppliers • Amazonia Program 1) Science, Technology and Innovation; 2) Sustainable Production Chains and 3) Institutional Reinforcement **(RG,PG,RM,TBL)**	• Education of employees and suppliers • Private social investments through Instituto Natura, sustainability education for employees and suppliers • RAE PAM (Amazônia Educational Support network)
		Business ethics	**Tools**	**Research and Development**
		• Articulated through Sustainability Vision 2050 • Normative values (e.g. zero waste)	• Measurement of quality of relationships with local stakeholders • Various measurements	• Amazon Innovation Center (NINA) generates knowledge in, about and for the region **(RG,PG)**

		• Strong commitment to transparency and accountability (ingredient table on Ekos Line) • Formal recognition of sustainability (GRI, DJSI, B Corp)	relating to ingredients sourced from the Amazon, value added to Amazon region etc. • REDD+ projects in Amazon (part of Carbon Neutral program) • Natura's Biodiversity Input Supply Chain Verification System	• Natura Amazônia Campus • Deployment of scientific personnel
		Labour practices	**Tech and products**	**Climate for action**
			• Ekos line (100% Amazonia Soap) Natura Social Biodiversity system (geographic online information system, enabling online localization of chains and access to indicators 35)	• Communities in the Amazon monetary and non-monetary benefit through social biodiversity (e.g. education programs, infrastructure, access to traditional knowledge) • Local leadership programmes • Company's goal to generate business in the region worth R$ 1 billion **(TBL)**
		Relations with NGOs & other external stakeholders	**Innovation**	**Synergy**
		• Valuation projects for measurement of ecosystem goods and services (NGOs) • Institutional reinforcement projects with municipal and state departments and NGOs in the Amazon region fostering local development (e.g. education and non-timber related forestry)	• Ekos-valuing social biodiversity • Plant-based ingredients as source of innovation • CO-creating-networked innovation process • 30% ingredients sourced from Amazon by 2020 (17% already achieved in 2014) **(RG)**	• Circulation of knowledge through NINA • Production of local innovation and expansion of scientific workforce

7.5.2 Precious Woods

Table 15: Precious Woods' Performance Evaluation

Organisational level	**Financial**	**Stakeholders**	**Process**	**Learning**
Parent company	**Revenue Growth (RG)**			
	Productivity Growth (PG)			
	Risk Management (RM)			
Business/ unit site		**Community relations**	**Management**	**Employee potentials**
		• Build rapport with locals, i.e. include them in business operations, and provide sustainable economic development by teaching gainful skills and know-how to locals	• Enforcement of FSC label and practices **(RG)**	• Providing education and • Teaching workers how to plant things sustainably and enhance productivity of forest • Teaching locals how to make crafts from simply means to generate income **(RM)** • Sexual health education due to overpopulation **RM**
		Business ethics	**Tools**	**Technical infrastructure**
		• Policy of no assistencialismo (no welfare) to ensure people can survive without company • Nature conservancy and animal welfare • Promotion of education and health • Full transparency about every operational step • Triple-bottom-line value creation criterion	• Identification of harvest-ready trees, using GPS • Route planning in forest to minimize damage • Proper designation of machines to reduce fuel and ensure minimal invasiveness • Designation of protected areas	
		Labour practices	**Tech. and innovation**	**Climate for action**

		• Add value to communities. Company operates, using the input of 640 families-3200 people, who benefit from PWA locally. • Sustainable stewardship over forests that the company owns, approx. 430,000 hectares **(RM, RG)** • Strong collaboration with local government agencies and certification bodies **(RM)** • Continuous R&D on measures that solve on-site inefficiencies and that lead to triple-bottom-line performance enhancements (**RG,PG)**	• Biomass plant using recovery wood (organic waste) as fuel for power generation **(RG, PG)**	• Workers motivated by company's environmental and social efforts • Productivity bonuses for workers to maintain working morale and performance premiums • Provision of healthcare for locals
		Relations with NGOs and other specified stakeholders		
		• NGOs and architects help company source the most ethically and environmentally sound wood		

7.5.3 Veja/Vert

Table 16: Veja's Performance Evaluation

Organisational level	TBL	Stakeholders	Process	Learning
Parent company	**Governance**			
	• Company-wide Fairtrade certification • No-advertising policy to devote saved resources to sustainability of product • Full transparency about limitations of manufacturing process • Commercial disobedience			
	Social and environmental			

	issues			
	• Reflection of link between the finished product and challenges of its producers • Cultural pillar: slow fashion and sustainable consumption			
	Financial (RG) (PG) (RM)			
	• Zero-zero strategy **(PG)** • Buy more raw materials in high-yield years to offset shortfalls due to unfavourable weather patterns **(RM)** • Annual growth of 20 % **(RG)**			
Site		**Community relations**	**Management**	**Employee/supplier potentials**
		• Collaboration with 70 rubber-tapping families in biggest nature reserve in the Amazon Rainforest • Help communities to increase local value • Local mentor (Bia Saldanha) provides technical support for rubber tappers	• Accreditation of supply chain according to human rights and environmental principles through third-parties (e.g. IBD) • 3-year commitment with local farmers' association to ensure consistently good wages for cotton farmers • Focus on reinforcing relations with select farmers' associations through high demand of raw materials, e.g. cotton	• Increase of productivity through practical knowledge enhancement (e.g. handling of resin)
		Business ethics	**Tools**	**Climate for action**

		• Commitment to dignified existences and adherences to environmental responsibility of its producers	• Supply chain analysis in order to keep number of intermediaries as low as possible • Increase share of organic certificates through third-party auditors • Quality assurance through continuous consultation with producer groups and rubber tappers • Bia Saldanha, local supply chain coordinator	• Good wages- between 30% and 100% above the world market price • Stable incomes • Healthy agro-ecological practices without pesticides and simultaneous food-crop production
		Labour practices		**Research and Development**
		• Unified supply chains • Relations with Non-Governmental Organizations • Engagement with NGOs as liaising partners between company and local farming associations		• Inception of Smoked Liquid Sheets technology (FDL)

Source: Veja: An Ethical Passion for Fashion

Future Shapers A Decade of Innovation in Textile Sustainability (2002-2012). (2012).

7.6 Case study material

7.6.1 Natura

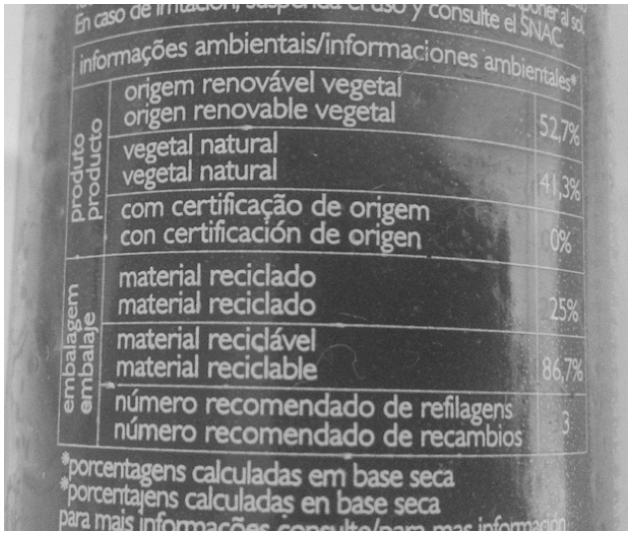

Figure 5: Product label Natura Ekos line

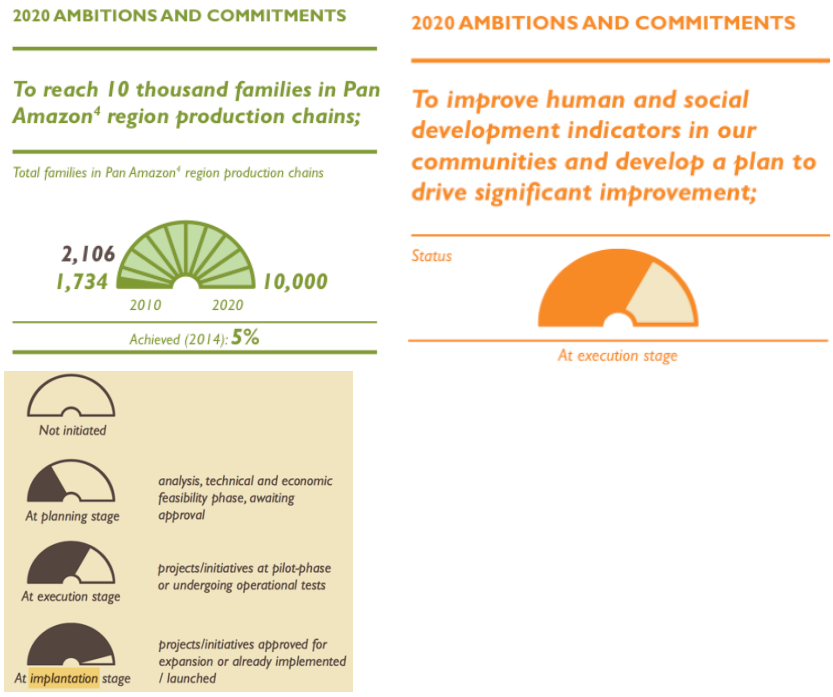

Figure 6: Exemplary status indicators for socio-economic development

Source: "Pense Impacto Positivo Visão De Sustentabilitade 2050". (2014).

7.7 Summary of drivers of and barriers to sustainable business in the Amazon

7.7.1 Summary of indicated drivers for business sustainability in the Amazon

Table 17 Product label Natura Ekos line

Criteria	Precious Woods	Companhia de Desenvolvimento de Serviços Ambientais de Acre (CDSA)	Natura	Comments
Strategic comparability within the industry		✔	✔	
Interest of our shareholders and clients in sustainability	✔	✔	✔	
Possible future legislation regarding new sustainability issues in the Amazon	✔		✔	
The private sector has the power to put an end to deforestation in the Amazon.	✔	✔	✔	PW contends that in order to succeed, the private sector needs government assistance. Natura contends that the private sector definitely has a crucial role.
Our business has the ability to raise living standards in the Amazon.	✔	✔	✔	Tavares from CDSA strongly agrees with this comment. Natura believes that it can contribute to better livelihoods through its operations, but not alone.
We believe that the Amazon brings profitability to our business/ or has huge financial potential in the future.	✔	✔	✔	
Pressure from customers	✔	✔	✔	
Improve internal and external communication	✔	✔		
Profit sharing also depends on environmental health and safety results	✔	✔		
Environmental and social actions give visibility	✔	✔	✔	
Image	✔	✔		
Improvement of resource efficiency in the Amazon	✔	✔		
Being ethical and green is the inherent mission of our company.	✔	✔	✔	

7.7.2 Barriers to sustainable business in the Amazon

Table 18: Barriers to sustainable business in the Amazon

Criteria	Precious Woods	Companhias de Desenvolvimento de Serviços Ambientais de Acre (CDSA)	Natura	Comments
The notion that harmful activities are more profitable		✔	✔	
There are inadequate job opportunities for locals to earn enough money to sustain their livelihoods.	✔	✔	✔	
There are not enough (perceived) added-value activities that make it worthwhile to establish a business venture and the Amazon.	✔	✔	✔	
Government policies are impairing the spread of sustainable or triple-bottom-line businesses in the Amazon.	✔		✔	
There is not enough expertise in the Amazon leading to profitability (lower human development index than in the rest of Brazil).	✔			Natura: HR is an important issue, but there is more than we are exploring.
A different work mentality of local and indigenous people	✔		✔	Natura: HR is an important issue, but there is more than we are exploring
Not enough investment money or interest in investing in the Amazon	✔	✔	✔	
Lacking or no technical innovation to make processes more efficient	✔		✔	

Continuation of Barriers from 5.2

Government policies are impairing the spread of sustainable or triple-bottom-line businesses in the Amazon

Although headway has been made in the sphere of access to biodiversity and benefit sharing in the Brazilian Amazon, government policies are often still lagging behind in recognizing the

realities on the ground and setting the right incentives. Frequently, inadequate laws and legislation lacking logic, are passed with very little local consultation with stakeholders like indigenous people and incumbent business owners on the ground. In the instance of Precious Woods, IBAMA, Brazil's Ministry of the Environment, passed a law stipulating that 50% of a log needed to be processed into wooden planks. This particular law exhibits very little connection to silvicultural realities on the ground, considering that under ideal conditions, commercial logs have a yield of 30%. Disconnect from Amazon realities is not only visible in "one- size-fits-all" policies for particular sectors, but also discernible in elements of structural policy in the macro sense, like welfare and unemployment payments. Exemplary, is the six-month rule, contained in the payment of unemployment benefits that has partially been made responsible for poor job-retention records in the Amazon region. With workers oftentimes leaving after six to seven months, it is very difficult for on-site managers to compensate for missing workers in light of production targets. Overall, entrepreneurs and local stakeholders wanting to produce timber and non-timber products, feel abandoned by public policy. Last but not least, there is an overwhelming consensus that the biggest failure relates to economic policy on the part of the government, namely the perverse mechanism of transfer payments to the Amazon, without the condition of establishing a forest economy of its own. This has dramatically stinted the establishment of a sustainable forest industry of added value.

There is not enough expertise in the Amazon leading to profitability (lower human development index than in the rest of Brazil)

Although based on a two-to-one concurrence of survey participants, apart from the availability of traditional knowledge relating to biodiversity and forestry, there is an absence of knowledge leading to competitiveness and profitability of sustainable forest products like wild rubber and certified timber. At the basic level, education is only available in urban centres in the Amazon, which tends to coincide with an above-average HDI relative to the rest of the Amazon. Hitherto, initiatives towards dissemination and quality of education that meet the local context are instigated not by the public sector, but by the private sector and NGOs, e.g. Natura's primary education programme *Trilhas de Letura* (Learning Trails) both of which are approved by the Ministry of Education. The lack of expertise is particularly pronounced in the sphere of S&T, which is largely attributable to negligence on the part of the public sector. Considering the strategic importance and potential of the region, the region's researchers amount to a mere 4% of the country's total of researchers. The devoid physical infrastructure resulting from this negligence, e.g. density of public universities and institutes, inadequate spread and quality of post-graduate programmes, tailored to local priorities, and poor internet connection has been responsible for the brain drain of skilled people and the capacity to attract skill. Similar to primary education, it is largely the private sector, NGOs or foreign investments that are instrumental in setting contextual expertise development in the region into motion.

Contextual customs and cultural differences

This aspect was partially agreed on, at least as a contributing factor and requires further investigation. Precious Woods suffered substantially from this problem, as local workers would sometimes only sporadically show up for work, due to competing sources of income, like fishing[47], activities that are usually more pronounced during the rain season. Empirical evidence suggests that it is difficult at times to consolidate the notion of free markets with local habits and attitudes. This means, conveying to locals that in order to remain profitable and keep investors, certain production volumes need to be achieved in a certain time. Attempts to redress this problem entail productivity bonuses, which have been employed with varying success. In this context, it is important for companies to build rapport with the

[47] The rain season is considered the high season for fishing, as low-income people in the Amazon can catch enough fish to sustain their families for an entire month.

indigenous population locally. This can be achieved by studying local concerns and customs, while communicating in no uncertain terms that in order to maximize local socio-environmental benefits, the company needs to remain profitable. Aiton Krenak therefore contends that

> *you should consult with local communities and ask how they feel about it and how you should you go about it? This local answer should be considered for the whole development of the project; you come, present something and listen. You act from that answer and consider that when planning…(personal communication, July 11, 2015)*

Not enough investment or interest in investing in the Amazon

The point of lacking investment was unanimously answered as being true. Fundamentally, there is high resistance on the part of investing companies, or private investors to put their money to work with companies sourcing from the Amazon, attributed to the longer lead time until returns on investment are visible. Unless investors have a genuine goodwill and are fully aware of the risks relating to poor on-site infrastructure, slow bureaucratic processes and corruption, the extent of investments usually is confined to the least valuable item in the supply chain, namely raw materials. Accordingly, it is observable that private sector investments are very rarely made in value-adding industrial infrastructure, with companies like Natura being amongst the exceptions. An additional problem that arises for businesses operating according to sustainable and law-abiding harvesting principles in the Amazon, is the consideration of the two principal seasons in the Amazon, the dry season and the rain season. Silvicultural principles specify a harvesting stop during the rain season, which only leaves the dry season to harvest, enabling the forest to recuperate. Under ideal circumstances, productivity is high enough to meet prescribed harvesting quotas and to provide desired returns for investors. However, as Christian Marzari puts it, "if you don't meet desired quotas due to the delayed receipt of a harvesting permit, or due to repressive policies, or inefficiencies of state departments, your year is lost and investors will abandon you" (personal communication, July 14, 2015.). A similar account was given by Nina Braga, sustainability consultant of Osklin, stating that, if Amazon-sourced products are not ready on time for review in American fashion magazines, investments are withdrawn promptly (personal communication, July 23, 2015).

Lacking or no technical innovation to make processes more efficient

Corresponding with the last point, there is the widely accepted opinion that lack of innovation is detracting from the possibility of making processes more efficient overall, in order to reach scale and competitiveness relative to conventional products in the same category. Many operational processes are still characterised by inefficient, manual labour that oftentimes even puts workers at risk, such as the harvesters of jute, a declining craft, oftentimes associated with workers standing in the water all day, while being subjected to an array of waterborne dangers such as snakes (personal communication, July 23, 2015,). Cumbersome to harvest and by default of low value, due to the absence of technical innovation, these materials are mostly obtained from Bangladesh at bargain prices. To compensate for inefficient processes and the effort, companies like Osklin, Precious Woods, or Veja rely on customers' buying power, to express their appreciation for sustainably produced goods from the Amazon. However, it is not nearly enough to only appeal to compassionate Amazon enthusiasts with high spending power. Ultimately, the root cause of this situation is largely ascribable to inadequate S,T&I infrastructure and investment in the first instance, and extremely complex logistic and institutional problems in the second instance.

7.8 Empirical evidence of deforestation gathered by the author

Figure 7: Vegetation being cleared for farm land between Cruzeiro do Sul and Marechal Thaumaturgo in the State of Acre

Figure 8: Small-scale clearance of vegetation for food crops flying into Marechal Thaumaturgo

Figure 9: Land exhibiting the four recognized conditions of forest vegetation: "clean pastures", "pastures with bare shrubs", "pastures with bare soils" and "regenerating pastures"

Figure 10: Slash-and-burn land clearance observed between Cruzeiro do Sul and Marechal Thaumaturgo in the State of Acre

Figure 11: Cattle grazing along the Rio Juruá in Acre

Figure 12: Small-scale farming by ribeirinhos along the Rio Juruá

Figure 13: Small-scale clearance of land for food crops by ribeirinhos between Cruzeiro do Sul and Marechal Thaumaturgo

Figure 14: Slash-and-burn clearance of land for unspecified use (more often than not for cattle pastures) between Cruzeiro do Sul and Marechal Thaumaturgo