

## PROJECT MCSUSTAINABLE

### *How to Mainstream Sustainable Diets Through McDonald's*



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# Section 1: Background and Introduction

## 1.1 Current Situation and problem analysis (DS)

Whatever consumption patterns were sustainable on a planet of 6 billion people, will no longer be sustainable on a planet of 9 billion. Arguably one of the biggest issues currently facing humanity, is how to sustainably feed 9 billion people in 2050 without destroying the planet. But why is our current global diet and food system unsustainable? And what exactly does a sustainable diet look like? For example, the UN FAO has reported that raising animals for food contributes more to climate change than all transportation combined<sup>1</sup>. Due to its impact on climate, land, and water resources, the urgent need to manage the consumption of meat in our diet has been widely cited<sup>2</sup>. Despite this urgent need, global meat consumption is predicted to keep growing in the coming decades<sup>3</sup>. Undoubtedly, we need innovative strategies to address the predicted trends of environmental depletion resulting from our global diet.

Not only does a future food system need to address environmental sustainability but it will also need to sustain human health. Currently, the global food system is suffering from the 'double burden' of nutrition, with 2 billion people 'undernourished' and 1.5 billion 'over-nourished'<sup>4</sup>. Sustainable diets will therefore require both security of supply and accessibility to quality, nutritious products that are good for our health. In many developed countries, the food system is increasingly being dominated by cheap, processed food. Similarly, this trend is also now being witnessed in several of the developing countries<sup>5</sup>. There is a great need to address these socio-economic trends and instead promote the development of more sustainable diets and food systems.

### 1.1a The impact of our global diet on the environment

One of the main forces behind many of the 21st century's environmental challenges is the impact of our global food and agriculture system. Population growth and increased patterns of consumption have transformed food production around the world into highly industrialized, large-scale operations. As a result of these operations, food systems are having an extensive range of negative environmental impacts on our land, water, and atmospheric resources. Therefore, in order to set the context for the later parts of the report, the following will discuss some of the main impacts our global diet is having on the environment. In addition, given the purpose of this report, the below will also highlight some key impacts specific to livestock production and the consumption of animal-sourced foods.

#### Our global diet and land impact

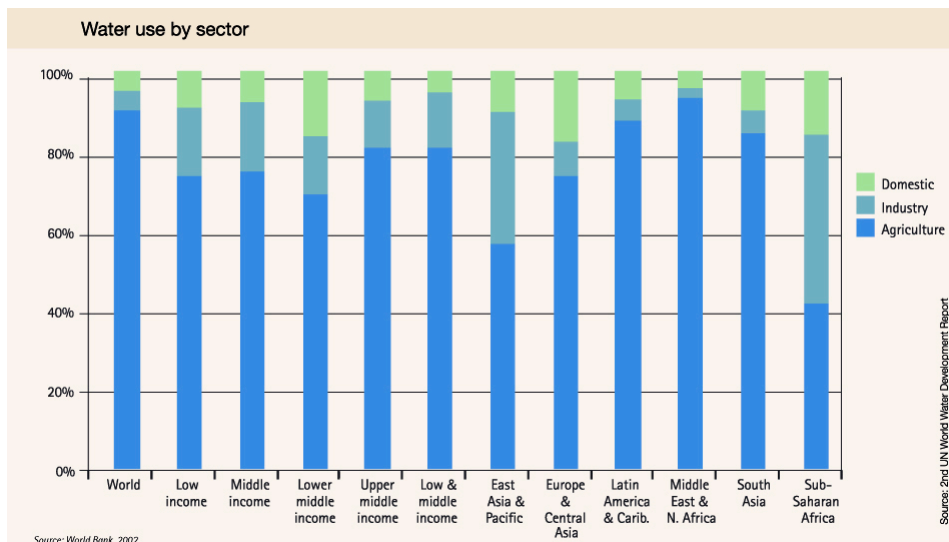
The main impact of our global diet stems from the clearing of natural habitats for agriculture purposes. Around 50% of the world's habitable land has already been cleared in order to produce food. Overall, farmland now covers 38% of the world's land area<sup>6</sup>. The challenge, however, is that fertile land is being exhausted and we are continuing to clear natural habitats in order to meet rising consumption patterns. Recent examples include the conversion of rainforest in Indonesia to palm oil plantations, and large areas of the Amazon rainforest for soybean production and cattle grazing. In addition, because of unsustainable food production, 12 million hectares of land are being lost each year to desertification<sup>7</sup>.

Livestock production is specifically the biggest anthropogenic user of land and the expansion of livestock production is a key factor of deforestation either for grazing pastures or to grow feed for livestock<sup>8</sup>.

## Our global diet and water waste

Another critical impact of our global diet is water waste in our food system. Agriculture uses approximately 70% of our planet's available freshwater<sup>9</sup> - when we compare this figure to other sectors such as Industry use (23%), and Household use (8%) we can see that the future of our planet's freshwater resources will be won or lost as a result of how we produce our food and our consumption habits. Currently, it is estimated that 15-35% of water used by agriculture is unsustainable<sup>10</sup>. In other words, this means that approximately 60%, or 1,500 trillion liters, of the 2,500 trillion liters of water it uses each year is wasted.

By draining water resources, not only does unsustainable food production damage the environment, but it threatens the future of food production itself. Without water, we cannot produce food. Major food producing nations like the United States, China, Australia and Spain face serious challenges in terms of water shortages if current dietary demands and production methods are maintained. Water usage in food production also results in other harmful impacts to the environment, including salinization of soil and the pollution of marine environments.



Specifically, livestock production is responsible for over 8% of global human water use, mostly for the irrigation of feed crop<sup>11</sup>. Livestock also contributes significantly to water pollution and prevents the replenishment of water resources through erosions and compaction of soil.

(Figure 1: Water use

by sector. *World Bank, 2002*<sup>12</sup>)

## Our global diet and soil management

Top soil is a precious resource because without topsoil, little plant life is possible. Topsoil is the result of hundreds of years of biological processes. When land is cleared to produce food, the topsoil is eroded by being blown away by wind or washed away by rain. For example, as a result of soy production, Brazil loses 55 million tons of topsoil every year<sup>13</sup>. This results in degraded land that is no longer able to produce food and more forest is cleared and the cycle continues. Soil washed away runs into rivers, lakes, and oceans, further damaging the productivity of those environments. Not only is eroded soil washed away, but the pesticides and fertilizers used in the food production are also carried along with it, which pollutes ecosystems.

Specifically, due to overgrazing, erosion, and compaction from livestock, it is estimated that 20% of pastures and rangelands have been degraded to some extent and up to 70% of land has been degraded in dry areas of the planet<sup>14</sup>.

## **Our global diet and pollution**

Food production commonly involves the application of many chemicals which end up in the natural environment and also in the food we eat. Chemical application during food production is one of the planet's leading sources of pollutions. The application of pesticides, fertilizers, and other chemicals during food production, has increased dramatically since the 1950's 'green' revolution in order to maximize yields.

Pesticides have a very damaging impact on ecosystems; not only do they kill the target pest but they kill many species throughout the food chain. Pesticides in the food we eat can cause a range of adverse health effects, including simple irritation of the skin and eyes, to more severe issues such as damage to the nervous system, hormonal and reproductive problems, and also cancer<sup>15</sup>

## **Our global diet and climate change**

Food production for our global diet is one of the main drivers of climate change. Food production as a result of our diets is responsible for approximately 14% of global GHG emissions<sup>16</sup>. Main sources of emissions include fertilizer usage, livestock production, 'slash and burn', and clearing of land. For example, the clearing of land for agriculture purposes represents a similar contribution of GHG emissions, in terms of land-use changes, as the agriculture sector itself<sup>17</sup>. Together, the clearing of land for agriculture and agriculture production represent a significant barrier to the mitigation of climate change.

Additionally, according to the UNFAO, in terms of CO<sub>2</sub> equivalents, livestock production is responsible for 18% of the greenhouse gas effect because of the high warming potential of methane and nitrous oxide<sup>18</sup>.

## **Our global diet and genetic diversity**

To achieve commercial efficiency, traditional diets and local crops are increasingly being replaced by a handful genetically similar varieties. Out of the huge variety of edible foods today, 30 crops alone account for 90% of the food we eat, while 14 animal species account for 90% of livestock production<sup>19</sup>. This loss of genetic diversity is a risk, especially now given the effects of climate change because it compromises the ability of species to adapt to changing conditions. This increasing lack of diversity in our global diet, therefore, represents a significant threat to our long-term food security.

## **Our global diet and future environmental sustainability challenges**

When farming operations are sustainably managed, they can help preserve and restore critical habitats and protect water and soil resources. But when practiced irresponsibly, farming presents one of the greatest threats to species and ecosystems. For example, given the huge population and economic growth in many developing countries, if the demand of animal-source products continues to grow at current rates, it is estimated that we will require 67% more land than the planet has available<sup>20</sup>. Given the above discussion of the impacts, if environmental sustainability is going to be achieved, our future diets should promote the following principles:

1. Food production that represents the most efficient use of land and decreases the need for deforestation.
2. Food production that avoids water wastage.
3. Food production that avoids polluting chemicals.
4. Food production that sustainably manages soil.
5. Food production that mitigates the effects of climate change
6. Food production that protects genetic diversity

However, the challenge with sustainable food production is that there can be no single, globally applicable, sustainable management solution for agriculture. This is because agricultural practices depend on specific variables such as climate, ecology, geography, demography, affluence, and regulation. Nonetheless, sustainability principles can be applied across different settings in order to work towards the above principles, according to the conditions of the given region.

## **1.1b Our global diet and socio-economic food security impacts (CW)**

Food security is a global concern that is a primary factor in the discussion of sustainable diets. Food security is a concept that the World Health Organization (WHO) defines as “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life<sup>21</sup>.” The idea of food security relies on consistent availability, access, and proper management of food sources.

### **Our global diet and food availability**

Ensuring that food is obtainable on a consistent basis and in the right quantities is crucial to security. Without reliable sources of quality food, individuals and households are unable to maintain a genuinely secure diet. Depending on the context, availability can include food aid, availability and use of human, natural, and economic resources, and food acquired through domestic and imported veins<sup>22</sup>. The current situation and projection for 2050 maintain that natural resource scarcity will persist. Should this be an accurate prediction, land exploitation for agricultural use will continue to be or exceed current statistics of 40%, 52% of marine fisheries are currently fully exploited, while 32% are over exploited. By over exploiting our land and natural resources, resource availability is declining and threatening the opportunity for global food security and sustainable diets<sup>23</sup>.

### **Our global diet and food access**

In conjunction with availability, individuals must maintain the ability, with regard to finances and proximity, to acquire food that is sufficiently nutritious. In 2011, an estimated 50 million Americans were food insecure; this statistic is comprised of 33.5 million adults and 16.7 million children<sup>24</sup>. This suggests that these households were without proper financial and/or physical access to secure food sources. Sustained financial and physical access to secure food is essential to maintaining a diet that is fundamentally sustainable.



## **Our global diet, health, and distribution**

With regard to health, households having adequate amounts and prolonged financial and physical access to secure food sources dictates the opportunity to have nutritious diets. Once food is obtained, distribution within the household also contributes to health and potential variations in health within members of the same household. In a study reviewing intra-household food distribution in Guatemala, it was discovered that there is a correlation between how much an individual contributes financially to the family and food distribution patterns<sup>25</sup>. As seen in the case presented, these variations can exist between cultures, highlighting the integral role of culture and social impacts within this discussion.

## **Our global diet and food use**

Utilizing food properly is also a vital element of food security, requiring that populations be educated on nutritional needs and proper consumption habits to ensure optimum nutritional value. As a significant percentage of adolescents in the United States consume high volumes of pizza, soda, and fruit drinks, 40% of their daily caloric intake is comprised of empty calories from artificial sugars and solid fats<sup>26</sup>. Lacking information on inadequate nutrient consumption contributes significantly to the improper use of food. Finally, in order for genuine food security, it is essential that these elements must be sustainable in the long-term. Within the context of sustainable growth and the adaptation of sustainable diets, food security is a central topic that is directly related to global issues of health, globalization, current food production processes, and food distribution.

## **Our global diet, food security, and globalization**

As globalization continues, production, distribution, and consumption habits that dictate the current food system have the potential to perpetuate food insecurity. As interconnectedness and interdependence are continuously increasing, international agreements surrounding agricultural trade are strengthening international reliance on resources, which is a major factor of food security. Should the overexploitation of natural agricultural resources continue, sustainable food security will not be feasible on a global scale. In contrast, globalization has the potential to expose the importance of food security and force the implementation of global legislation to address the issue systemically.

## **1.2 Project Parameters (IM)**

The above sections demonstrated that, not only is there a broad range of sustainability challenges facing the food system, but similarly, there are also a broad range of players who are responsible for both the problems and possible solutions (i.e. private sector, governments, international organizations). For example, even beyond our problem analysis, there is a whole area of political factors (i.e. trade, subsidies) that can be attributed to causing problems in the global food system. Given this broad range, especially when dealing with such a complex concept like the food system, in order to provide the project with a practical direction, we have set the following project parameters.

### **1.2a Scope**

We believe that the negative environmental impacts of meat consumption, resource depletion, lack of access to quality/nutritious food, and culturally impactful enterprises are best represented by the fast

food industry or quick service restaurants (QSR). This industry uses vast quantities of resources, promotes less than nutritional products and encourages cultural consumption habits that go beyond the limit of which we can currently sustain ourselves. The mere existence of this business threatens the health, wealth and sustainability of this planet and its inhabitants. This indicates a need to address and analyze the fast food industry to explore possible solutions to shift this industry towards a sustainable future. Within this project we will focus specifically on McDonald's as the leader of the fast food industry because of their access to the masses and their economic power which allows them to make significant changes for better or for worse. Our hope is to create a case that will ignite McDonalds' stakeholders to influence the company on a fundamental level and demand change.

## 1.2b Objective (DS)

### **Objective 1: The Fast Food Industry as a Force for Good?**

As demonstrated in the above discussion, the problems of our broken food system are immense. There is no silver bullet to overcoming the challenge of the future food system; but there are potential solutions. What we seek to do with this project is provide one of those solutions. Throughout the project we will provide a menu of potential solutions that address how an industry as large as the fast food industry can have a positive impact on the planet through implementing sustainable diets into their value chain. In order to look at the possible implications of what this would look like, we chose to use McDonald's as it is the largest of all fast food chains and because of its potential to influence diets both geographically and economically. Our aim is to find the areas in which McDonald's can improve, both for their stakeholders and themselves, through the defining and analyzing the metrics of a sustainable diet.

Our project will, therefore, aim to explore what the concept of a sustainable diet means for the world's leading fast food retailer and what McDonald's can do if it genuinely wants to demonstrate true corporate social responsibility for sustainable development of the food system.

### **Objective 2: Propose a Tool for the Assessment of Sustainable Diets**

In order to achieve the above objective, it will require us to assess the current performance of McDonald's with regards to the sustainability of the food it offers, which we will refer to as the 'McDonald's diet'. In order to do this assessment we will need to develop a methodology. However, as we will discuss in the following sections of this report, the concept of sustainable diets is complex to assess. Therefore, we have also set an objective to propose a useful framework that can help guide assessment of the topic. The framework will be designed not only to serve the interests of this report, but furthermore, to be applicable to a range of projects or research on the topic. Our objective will not be to create a perfect and technically sound framework but rather to construct the cornerstones of what such a framework could look like. Additionally, we hope our experience with such a framework will be valuable in terms of stimulating further investigation into the effectiveness of such a framework.

## 1.3 Justification (DS)

### 1.3a Why a sustainable diet?

A food system is essentially comprised of three stages; the producers, the suppliers and the consumers. As outlined above, the challenges of the current food system and the impact of our global diet both environmentally and socially are extensive. There are many approaches that can be taken in order to address the issues associated with the 'broken food system'. The concept of sustainable diets is one approach that will aim to repair the food system by influencing each of the stages accordingly. That is, providing a guide for producers on how and what to produce, motivating suppliers from whom and what to sell, and finally informing consumers where and what to buy.

### 1.3b Why McDonalds?

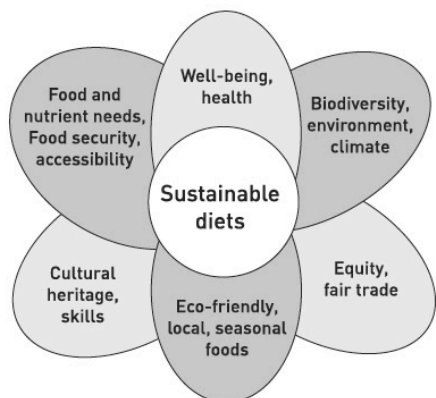
Serving 68 million customers each day, McDonald's is the leading global fast food retailer, found in 119 countries around the world and operating 34,000 restaurants worldwide<sup>27</sup>.

McDonald's states in their current CSR initiative that they are on "The Road to Sustainability". We believe that when your core product is meat, fats, and sugars at a low price, the road to sustainability is going to be a long one.

McDonald's is the fast food industry leader and sets the standard for the rest of the industry on everything from marketing to kids - to how food is sourced, grown, and processed. Therefore, we believe that by targeting McDonald's, we are aiming at the industry leader, hoping that changes made by McDonald's will set an example for others in the fast food industry. Given the increasing influence of the industry on the food system, we argue that making the industry more sustainable will provide an important contribution to the development of a sustainable food system for the future.

## Section 2: What is a sustainable diet

### What are sustainable diets?



"What is a sustainable diet? A diet that is healthy, affordable, environmentally sustainable and culturally acceptable. That is a tall order. It is easy to think of diets that are affordable but unhealthy, or diets that are healthy but environmentally unsustainable, or diets that are environmentally sustainable but culturally unacceptable. But all together? Its important that we try to do this--we have to operate more consciously in a resource constrained world<sup>28</sup>." The

figure<sup>29</sup> below demonstrates the key components in which sustainable diets comprises, according to the FAO. We have chose to adapt this definition into our research.

A sustainable diet ensures that **proper nutrition** is provided and acquired through **supply chains** that are properly managed, taking into consideration the protection and management of **biodiversity**. Fundamentally, sustainable diets consider the **cultural** relevance of diets and function to supply secure, affordable, long-term, reliable sources of food.

## 2.1 A Sustainable Diet

One thing is demonstrating the need for sustainable diets, the next question, however, is what exactly does a sustainable diet look like?

The challenge with defining this concept is that a “sustainable diet” has different meanings in different contexts. There is not one type of sustainable diet. Defining a sustainable diet is highly dependent on the socio-economic, environmental and cultural context. By giving some examples, the below sections will explore some of the differences that exist between contexts.

### 2.1a Environmental differences (DS)

A critical factor for defining what is or is not a sustainable diet is the environmental dimension. Put simply, it is the type of food consumed aligned with the environmental conditions of a given context in order to promote sustainability of the natural resources and food security.

We have already discussed how, from a global perspective, there is the need to align our global diet with the planet's natural resources. At the same time, given environmental differences across the planet in terms of geography, climate, and natural resources there cannot be just one type of environmentally sustainable diet. Typically, an environmentally sustainable diet should be dependent on the type of food that is able to be grown, caught or produced regionally in a way that maintains the natural resources necessary for producing that food. However, in a globalizing world, what exactly does regional mean? Especially in industrialized countries, the modern food system is highly dependent on transportation of food from one region to another. It is possible to buy food products that have been transported from the other side of the world. For example, buying apples in Germany from New Zealand. The issue of environmentally sustainable food production is often not as simple as it seems. At first glance, it may seem that the idea of transporting apples around the world may not be environmentally sustainable because of the emissions associated with the transportation stage. However, transportation of our food is only one of the stages of production. Transportation is estimated to be approximately 10% of the total energy required to get food from farm to fork<sup>30</sup>. What if, for example, due to seasonality, the apple production in New Zealand required less resources and energy to produce when compared to apples grown in greenhouses. Alternatively, what is better for the environment, organic apples from the other side of the world or regional apples that were grown with pesticides?

So while biophysical differences between regions will play a role in defining an environmentally sustainable diet, it is not the only defining factor. Other factors that impact sustainability such as differences between production methods, locality and seasonality are also important in order to determine overall resource efficiency of a given diet.

## 2.1b Socio-Economic and food security differences (CW)

A sustainable diet with regard to food security requires that availability, access and distribution, and management of nutritious food resources exist on a basis that are able to be sustained in the long term. This demands inherently that food is acquired through resources that have been properly managed and sourced with the consideration of biodiversity protection. Food insecurity is most prominent in developing countries, comprising 98% of the world's population who suffer from malnutrition<sup>31</sup>. Within this context, culture plays a relevant role as it dictates what and how communities eat. The intersection of each of these elements functions as a sustainable diet, adaptable based on cultural, environmental, and social relevance.

### Availability, access, and sustainable diets

Availability of secure food resources varies significantly based on context. Secure food resources requires quality sanitation and nutrition, sufficient quantities for all members of the community, continuously maintained on a long term basis. As there are grave disparities between classes, nations, and communities, availability in global terms is severely compromised. In the United States, availability of affordable, nutrient rich foods such as whole grains, fresh fruits and vegetables, and lean proteins in low-income communities is limited. Supermarkets, which typically carry such items, often exist outside of these communities, providing the obstacle of proximity with regard to access. These elements, combined with lack of financial resources and high prevalence of affordable, low-nutrient, and high in sodium and sugars, positions individuals in marginalized communities for continued food insecurity and at risk for health issues<sup>32</sup>.

### Socio-Economic variations

Making the argument that sustainable diets are necessary to adapt on a global scale is, for many communities, a transition that is currently unattainable and of low priority. Existing in communities that lack financial access to nutritious food in general, let alone food that is sourced efficiently and sustainably, positions the concept of sustainable diets relatively low on the totem pole, if even a distant concern. Therefore, proposing the idea of acquiring a diet that may require financial resources that exceed those currently allocated for large quantities of food low in nutritional value, is an idea that is difficult to swallow for many. For those who currently obtain the luxury of food availability and access, proposing the adaptation of a sustainable diet is much more feasible. The contrast of these socio-economic conditions are highly representative of the difficulties that exist when attempting to propose a systematic shift on a global scale.

## 2.1c Cultural differences (IM)

Just as important as the environmental and socio-economic elements, is the cultural dimension of a sustainable diet. Highly overlooked, because of the complexities it entails, the cultural aspects of a diet must be taken into consideration with respect to the social elements of each community. There are various contributors that must be taken into consideration when developing measurements to ensure that the cultural context has been integrated into a sustainable diet. In this section we will identify the barriers that should be addressed when considering a culturally appropriate and comprehensive sustainable diet.

## Defining Culture

Our definition of ‘culturally appropriate’ maintains that the diet should be aligned with the customary beliefs, social forms, and material traits of an ethnic, religious, or social group of society. The diet should equally consider the impact, availability, accessibility and local preferences without compromising existing traditions or customs. This means that a culturally appropriate and relevant diet will have to be defined through the environmental factors as well as the socio-economic factors to determine if it is well **accepted**, **integrated** and **adaptable**. This will vary across the board within the same country and regions even, so it is important that this piece is well adapted and considered as a sub-set to the other factors. We are not suggesting that this will not be subjective, however, this should be determined locally and on a case by case basis, thus creating a local subjectivity that comes as an internal solution rather than imposed by an external party.

How do we define what is relevant as a sustainable diet and what is not? Within every community there are different customary beliefs and values that need to be taken into account. The food that is suggested within the sustainable diet must ensure that it is appropriate for the people that are not only eating it but that are producing it. More often than not it has been over simplified to create a diet that is nutritionally healthy and then applied across the board. One of the most common examples we can find is the application of the Western diet. This diet incorporates many beef products to a South-East Asian diet which is highly influenced by Hindu traditions. The Hindu do not eat beef and even further, revere the cow as sacred. Without taking cultural practices and values into consideration this diet would be a complete failure. Although it may be a diet that meets their needs as far as nutritional and economical value, it would fail miserably if the cultural aspect was not taken into consideration. This is just one example of how important it is to take cultural differences into account when integrating a sustainable diet. In the sections below we will explore the complexities of how to create a culturally appropriate diet across different sections: regionally, production, political, religious and generational in order to address the areas we believe are important to take into consideration.

## Regional

The cultural constructs of a society will depend on many different factors as outlined above. In our analysis we will focus initially on the **geographical** and physical constructs of an area and how it shapes the cultural aspect of society. For the most part, the geographical makeup of a community influences the societal way of life. Traditionally, geographic areas were what defined society. If we look at ancient civilizations such as the Polynesians, surrounded by ocean, much of their diet and daily life consisted of subsistence from the ocean. As globalization defines the world we live in today, food is packaged and shipped to just about every corner of the earth in a matter of hours, our society has in many areas shifted to no longer rely on what our geographical conditions provide us. However, is this truly sustainable, and is the importation of foreign and exotic foods simply allowing access to food that once was inaccessible, or is it creating a problem of dependency? The answer, we believe, can be found by analyzing traditional conditions within concentrated populations, in order to find local solutions for solving our broken food system. By embracing a traditional diet that was founded on geographical constructs, food independence can re-emerge and dominate communal diets. The question is: are people of our modern world willing to embrace this? How will it effect this new globalized culture we have created? It is evident that we will need a balance, but it should be considered when creating a sustainable diet, as to what can be produced locally, at what quantity and at what cost.



If people were able to produce their food locally, as ancient civilizations had done, it would not only require less resources, as it would adapt to a system that embraces non conventional farming techniques and the diversity of crops, it would simultaneously enrich the traditional culture and have major environmental benefits as well. Though it can be difficult to apply this on a larger scale, it will be crucial in areas that are able to embrace it to begin to wean themselves off of the heavy reliance on the importation of food and conventional farm products and into a locally produced diet that encourages traditional and cultural resurgences mixed with a modernized system.

Looking back into historic and traditional conditions of an area will help to identify what type of food has the ability to be produced locally and has been integrated into not only the diet of the community but the practices of production and preparation. Ancient societies such as the Polynesians diet was based on a system completely reliant on the geographical features of there land called the *Ahupua'a* System featured in this figure to the right. Utilizing the resources in which they were surrounded, shaped their culture and the ways in which they lived and ate<sup>33</sup>.



A challenge that could arise when attempting to integrate a balanced diet in areas of hunger and poverty is that the food incorporated in the diet is not available in the area. The inability to produce food locally to obtain true self-sufficiency will not enable a truly sustainable diet. For this reason it is extremely important to take into account the geographical limitations or advantages.

### Consumer Awareness

This also brings up the question of local food versus organic or 'sustainably produced' food. Where does the priority lie when identifying if a product that is produced locally is more culturally appropriate than a product produced organically? This will depend on a number of factors. Depending on whether contributing to the local economy is more important than supporting organic farming techniques, or if the people in the community understand the differences between organic and non-organic.

Not only does this bring into question the awareness of the community but the way food is delivered to them. Are people in the area generally aware of where their food comes from? Are they a community that relies mostly on imported factory farmed and inexpensive food? For the most part this is common in many developed countries. Currently, there is a disconnect between where food comes from and how it gets to the local grocery store or restaurant. In a survey done by the U.S. Farmers & Ranchers Alliance in 2012<sup>34</sup> three out of five Americans admitted that they would like to know more about how food is grown and raised, but feel like they have don't have the time or money to do so. On the production side, nearly three out of five farmers and ranchers believe that consumers do not have an accurate perception of modern farming and ranching. With this being said, overall there is a huge discon-

nect between the average consumer and the producer, which can cause many problems within the behavior of consumers. This will also have an affect on animal welfare and the mistreatment of animals within large factory farms. If consumers are not aware of where their food comes from or how it is processed this leads to a culture of consumer ignorance and a continuance of mistreatment of animals within unregulated factory farms.

## **Political**

There are a number of ways that policy shapes society and changes the culture of society overtime. Generally pushed by either civil society or the private sector, policies change social norms and acceptances in extremely short amounts of time. Take the 'Bottle Bill' for example. This bill proposed a five to ten cent tax on every bottle that could then be redeemed if recycled. Proposed and passed in ten states across the U.S. it has proved to increase the recycling rate by at least 30%<sup>35</sup> in all states. This direct affect of how policy can influence the lifestyle of a community is highly effective. Not only does a policy such as the 'Bottle Bill' give an incentive to recycle but also it creates a subconscious awareness of society. A new perspective on an object that was once just trash and rarely thought about, to something that all of a sudden had a value and shifted a mentality to create change for good. There are many ways that policy can directly affect the culture of society in terms of food as well.

Currently at international and national levels leaders are making decisions about the banning and/or labeling of Genetically Modified Organisms (GMOs). This would mean that policy would then regulate what type of food we consume and or gives the consumers the power to choose. Just through this policy alone it gives awareness to civil society about the food that they are purchasing thus influencing the culture around products purchased and consumed. The policies that are set by the governments are important to take into consideration as it can directly affect the way food is consumed and produced.

A more indirect effect of how policy can influence the way society consumes or produces food is through policies that will affect how food is delivered or by whom it is delivered. In this case we will take an example of the U.S. Farm Bill in regards to the incentives created to increase conventional farming in the United States. With the subsidies provided to a few of the large agricultural industries in the U.S. to provide 'commodity crops' have shaped the prices of unhealthy food and habits of America<sup>36</sup>.

In order to affect sustainable diets in a positive way governments must create policies at county or state levels shaped by local stakeholders to encourage the proper production and consumption of the society<sup>37</sup>. In many ways smart policy will be a key factor in influencing a sustainable diet to society.

## **Religious**

Within the same geographical and political areas there also exist another dimension of which is religion. Many religious practices and beliefs have an influence on not only the everyday lifestyle of people but on their diet. It is important to respect and take into consideration specific religious practices when constructing a sustainable diet for a community. Not only can religions construct direct dietary patterns but they can also affect the mentality of the community in terms of how they view the production and consumption of food. This is where animal welfare should also be taken into account. As mentioned earlier in Hinduism it is forbidden to eat beef, and thus would be culturally inappropriate to factor in beef to their diet even though it is locally available. This is an extreme example, however there are many ways in which religion influences a culture even within the days that it may consume



food, or the ways in which it must be consumed. All of these things should be taken into consideration when analyzing a sustainable diet.

## **Generational**

The final factor within cultural appropriateness to take into consideration is the inter-generational differences. With technology changing rapidly the gap between generations and how they receive knowledge and perceive things also change. For this reason the way in which a sustainable diet is created must also take into consideration the avenues in which to reach people of all age groups. While some messages may work among the millennials, the same way in which the media communicates with the millennial generation will be completely different in which a message should be communicated to their grandparents generation. This is where corporate culture comes into play in how it shapes society and its consumer behavior. For this reason, it is important to take into consideration how the private sector can influence the culture of a society especially within the food industry in order to integrate sustainable practices.

## **2.2 Universal Evaluation? (DS)**

As we have discussed above, there are various factors to take into account when assessing the sustainability of a diet. However, we believe that there is nevertheless a common set of factors across all diets that should be considered when determining sustainability.

To develop the set of factors for this project, we have considered other similar concepts, namely, poverty. Like sustainable diets, poverty is not a one dimensional concept associated only with a lack of income. Instead, poverty is a multi-dimensional experience arising from several factors. In light of these multiple dimensions, the Multi-Dimensional Poverty Index (MDPI) was created. The MDPI, does not suggest that poverty is simply a case of level of income, but rather an outcome of a range of factors, such as lack of health services, education and other living standards.

Like the MDPI, we have suggested the below factors for our Multi-Dimensional Sustainable Diet Index (MD-SDI), which together, these factors suggest a range where different sustainable diets can exist. The intention of this index is to provide a standard that can be referenced across diverse situations.

## **2.3 The Multi-Dimensional Sustainable Diet Index (CW)**

### **Methodology**

As previously stated, our methodology is modeled after the Multi-Dimensional Poverty Index, which considers a multitude of factors when evaluating poverty. Similarly, we have established 4 factors that determine the sustainability of a diet: Culturally Relevant, Healthy, Access and Availability, and Protective and Respective of Biodiversity and Ecosystems (PRBE). As the sustainability of ones diet is complex and dependent on different variables, incorporating an array of variables allows more inclusivity and greater potential for policy implementation. While each context will call on certain criteria and indica-

tors more than others, we have determined those that have the ability to be applied across various contexts.



Rating System

Our rating system assesses the overall sustainability of products and services in relationship to our determined criteria. Each rating evaluates the individual performance of the criterion indicators via verifier evaluation. The average of the indicator ratings then provides the overall rating for their respective criterion. We have determined indicators that mark each criterion exclusively. Each indicator, then, has verifiers that correlate and confirm the rating of its respective indicator.

Ratings	
0	No performance
1	Very low performance
2	Low performance
3	Adequate performance
4	Strong performance
5	Very strong performance

## Multi-Dimensional Sustainable Diet Index Criteria (IM, CW)

### 2.3a Index Criteria 1: Protective and Respective of Biodiversity and Ecosystem (DS)

INDICATORS	LAND MANAGEMENT	WATER EFFICIENCY	POLLUTION	BIODIVERSITY
Verifiers	Amount of land used	Gallons of water used	Amount of pollution emitted	All verifiers applicable
	Amount of deforestation		Amount of GHG	
	Farming techniques (certifications)			

### 2.3b Index Criteria 2: Culturally Relevant (IM)

INDICATORS	CULTURALLY ACCEPTABLE	CULTURALLY INTEGRATED & ADAPTABLE
VERIFIERS	Will it have a negative or positive impact on current culture	Community Awareness
	Are local customs, traditions and beliefs, respected and recognized?	Food Procurement & Production taken into account
	Is there a consumer demand present?	

### 2.3c Index Criteria 3: Access and Availability (CW)

INDICATORS	PROMOTES HEALTHY LIFESTYLE	NUTRITIONALLY ADEQUATE	SAFE
VERIFIERS	Positive influence on eating habits	Amount of calories	Amount of chemicals used (Pesticides, hormones)
	Positive impact on health issues	Amount of vitamins, minerals and proteins	Amount of GMOs
	Nutritional information provided	Rate of malnutrition (obesity and hunger)	Rate of documented food contamination outbreaks
	Community initiatives for healthy lifestyle	Rate of diet related health problems	

### 2.3d Index Criteria 4: Healthy (CW, DS)

INDICATORS	AVAILABILITY	ECONOMIC ACCESSIBILITY
VERIFIERS	Easily accessible transportation	Price of a meal
	Number of outlets	Price of food relative to average income
	Proximity	

## Section 3: What is McDonalds ?

### 3.1a What is the McDonalds model? (DS)

The McDonald's Corporation is the world's largest chain of fast food restaurants, serving approximately 68 million customers daily in 119 countries. McDonald's opened its first restaurant in 1940 and soon after developed its standardization food production method, which has been fundamental to the corporation's growth ever since. By 1963 McDonald's had 500 stores across the United States. In 1971, McDonald's opens its first restaurant in Asia. In 1974, McDonald's opens its 3000th restaurant in the United Kingdom. By 1990, McDonald's had open its first stores in China and India. Today, McDonald's operates over 34,000 restaurants worldwide, employing more than 1.7 million people. McDonald's core product is hamburgers and french fries but over the years, McDonald's product range has changed according to changing consumer preferences or depending on tastes of the host country it operates in.

The McDonald's Corporation has three sources of revenue. As an operator of restaurants, as a franchiser of its restaurants, and as an investor in properties. Only 15% of McDonald's restaurants are owned and operated directly by the corporation. The majority of McDonald's are operated through different structures such as franchising agreement and joint ventures with local entities. However, the McDonald's business model is grounded by alignment of the company, its franchisees, and suppliers. This alignment, is referred to as the 'McDonald's System'. The McDonald's Corporation does not make direct sales of food or material to its franchised restaurants but instead acts as a coordinator of the different suppliers and logistics operators to its franchisees. This value chain which McDonald's oversees, from supplier to retailer to consumer, is essentially no different from an ordinary restaurant. However, what make McDonald's different is the number of retailer or franchisees it manages. This gives the corporation great purchasing and bargaining power. The size of the purchasing power creates incentive for suppliers to be able to meet the demand. To this effect, McDonalds is the biggest buyer of many food products such as beef, pork, potatoes and apples in the United States. Similarly, McDonald's is the biggest distributor of children's toys in the world.

With its international expansion or 'McDonaldization', the company has become a symbol of globalization and a key contributor to the exporting of American food culture and consumption habits. Moreover, as a result of its geographical scope and size, McDonald's has frequently been criticized regarding topics such as obesity, marketing to children, business ethics and corporate citizenship. For example, in 2004, the documentary, *Super Size Me*, explored McDonald's impact on its consumer's health, specifically its contribution to the growing obesity epidemic in the United States. Shortly after this documentary, McDonald's removed its super sized menu options. While initially, we can see the power McDonald's has to influence issues such as consumer health and obesity, we can also see how McDonald's tends to be just reacting and designing its products according to consumer demand. This example, raises some questions about the relationship McDonald's has with society. What is the extent to which McDonald's is influencing food culture or is it really the other way around? Is McDonald's simply being influenced by consumer demand?

We will now review McDonald's strategy and positioning to understand why it has been so successful.

### 3.1b Strategic Approach (CW)

As previously stated, McDonaldization is a concept that is defined by the exportation of American Fast Food and, consequently, the exportation of American culture, customs, and habits in direct relation to food consumption. The success of McDonaldization is dependent on the corporation's "Plan to Win" strategy. McDonald's has established five components in their Plan to Win strategy: People, Products, Place, Price, and Promotion. Each of these elements are considered at every level of operation within the company, with the output being exponentially improved, customized restaurant experiences on a global scale. McDonald's as a whole has documented over the last eight years significant benefits for its shareholders.

Providing a contextually relevant experience on a continual basis is central to McDonald's strategy. As demands change according to clientele, McDonald's seeks to supply accordingly and keep up with customer needs. By centralizing their customers in their strategic plan, McDonald's is able to thrive in various communities on a global scale.

McDonald's has determined four different global business markets as their main focuses: Asia/Pacific, Middle East and Africa (APMEA), Europe, US, and Other Countries and Corporations (OCC). Within each of these markets, McDonald's maintains its role as a franchisor, functioning to offer localized experiences through each franchise, which directly impacts profitability. Aware of the current trend and necessity of adopting sustainable practices, McDonald's has established a strategy to address this global shift.

### 3.1c Current position and strategy: The Road to Sustainability (CW)

"Our journey together for good", is the opening quote used by McDonald's to define their road to sustainability. Direct and encompassing, this quote speaks to McDonald's strategic approach, which is grounded in coherence on every level of operation and the centralization of their clientele. McDonald's has determined five areas of sustainability focus: Nutrition and well-being, sustainable supply chain, environmental responsibility, employee experience, and community. Within each of these focuses, the corporation seeks to "strive to be better tomorrow than we are today<sup>38</sup>." Equally defining in the company's road to success, McDonald's understands the importance of Corporate Social Responsibility (CSR) and its role within sustainability.

Corporate Social Responsibility is an element of business that is more recently regarded as a necessary component of prolonged sustainability. Recognizing this fact, McDonald's has made a commitment to providing user-friendly nutritional information, which empowers customers to make balanced food choices, offering high-quality food, and being an employer of choice. McDonald's, on the whole, makes an effort to utilize energy saving equipment and reuse resources such as converting used cooking oil into biofuel to power more than half of their delivery trucks. With regard to the local community, partnering with local sports associations allows them to be an active influence and contributor outside of their traditional role<sup>39</sup>. In the coming sections, we have analyzed the strengths, weaknesses, opportunities, and threats (SWOT) of McDonald's strategic plan. Along with the SWOT, we have provided our analysis of their political, environmental, social, technological, economic, and legislative (PESTEL) factors of their business organization, and their individual and combined influence on the company's road to sustainability.

### 3.1d McDonald's - SWOT analysis (IM)

# SWOT ANALYSIS

<b>S</b> Brand recognition and value Best performance in industry Largest in industry High profit margins Marketing & Advertising budget, scope and reach Franchise ownerships and independency Strategic partnerships Successful marketing to children Ability to adapt High Customer loyalty	<b>W</b> High reputational risks Negative publicity Non-nutritious products High employee turnover rate Increase in market competition
<b>O</b> Shift in demand for healthier choices Home meal delivery Continued globalization Expanding to new markets (areas & consumers) Changing customer habits, groups & tastes Conservation & Sustainability Rising food prices Food Technology Innovation	<b>T</b> More competition in fast food industry Trend to healthier choices Local food movements Contamination and health outbreaks in products Difference in currency across regions Lawsuits against McDonalds Media backlash Rising food prices

In order to properly analyze McDonalds' business model, we have created a SWOT analysis that will paint the picture of the business' strengths, weaknesses, opportunities and threats. By analyzing each of these areas we will be able to build upon each area later on when we look at integrating a sustainable diet into this type of business model. Although McDonald's is only one of many companies within the fast food industry, through this SWOT analysis it will become evident why we chose the leader within this industry for the many opportunities that it can provide.

## Strengths

With over 34,000 locations in over 100 different countries worldwide it is no doubt that McDonalds' strengths lie within its scope, power and reach. Named the 7<sup>th</sup> most powerful brand in the world by Forbes<sup>40</sup>; just below global leaders such as Apple, Microsoft, Coca-Cola, IBM, Google and Intel; even with a profit margin loss over the last year, McDonald's is still significantly ahead of the rest of the fast food industry. All over the world the golden arches are recognized with surveys reporting from multiple nations that more people were able to identify the golden arches more often than the Christian cross<sup>41</sup>. Furthermore, with a 12.7% market share within the Quick Service Restaurant (QSR) industry in the U.S., McDonald's is by far paving the path for the rest of the industry<sup>42</sup>. With the largest control over the market, highest profit margins and brand recognition and value, McDonald's strength is in its numbers and ability to keep prices low for consumers and still create a profit.

Because of its reputation as the leader within the fast food industry it has also been able to create strong strategic partnerships. Partnerships with the latest Disney movies to create toys marketed to children in Happy Meals, is the best example of this. Not only have they created strategic partnerships with key companies but with current celebrities as well. These partnerships have helped boost their sales in addition to expanding their marketing base to other companies' customers as well. This has been critical in their success to maintain their lead on the rest in their industry.

McDonald's is one of the most recognizable and powerful brands in the world, and rightfully so, with a total of \$787.5 Million spent on advertising in 2012<sup>43</sup>. Marketing and advertising is one of their strongest areas as a company, not only in terms of creating loyalty, recognition among customers, but in their expansion to new markets and regions. With a strong marketing campaign, McDonald's is able to send messages directly to their consumers as well as be able to react quickly to anything that could possibly be a reputational risk. Their ability to react to their stakeholders concerns and create transparency around issues that hit the mainstream media is a strength thus far, however, there can be downsides to this as well, that we will point out in the "Threats" section below.

With restaurants all around the world McDonald's has created a successful model of franchising ownership, which has allowed them to expand further while generating profit and minimizing the workload through independent management and ownerships. By developing locally owned franchises, McDonald's has been able to capitalize on local knowledge and adapt to best meet the needs of specific areas while still maintaining consistency of their core business principles.

### **Weaknesses**

Being at the front lines of the industry also means there are higher reputational risks at stake. One of McDonald's strengths may be its prevalence in the media, however, negative media also makes it a weakness. With the negative criticism that naturally comes with being a multi-national corporate giant, McDonald's must also take into consideration the negative spins that come along with the products they provide. Fast food has an inherent reputation for having large quantities of low quality food at cheap prices. For this reason, there are many criticisms surrounding its products that it must consider. Their low quality food is a weakness in possible reputational risk as well as customer satisfaction.

Their cheap prices and overall business model of quick service restaurants has been copied over and over again, thus creating another weakness for the enterprise. The ability for other companies to build off of the same successes that McDonald's has done over the years has been flooding the market and thus creates more competition. Often times the smallest incident if not handled correctly by the company can become a reputational risk and for McDonald's their weakness in their lack of control that they have within their supply chain. If an incident is found in a supplier of theirs it will instantly reflect on McDonald's reputation and hold them accountable to the issue. Their lack of control or management down and within their supply chain can be due in somewhat to their independent franchises but also in their supply chain agreements with providers.

The final point of weakness of our SWOT analysis is their high employee turnover rate. Because of the low wages and in general lack of ability to move up to higher positions the employee retention is low and contributes in some cases to lower customer service. With their independent franchises and their relative independence the service of customers is possibly the hardest thing to be able to standardize across the board unlike their ingredients, in which they pride themselves in control. In this sense their



low retention rate has contributed to a lack in customer service and inability to create the same customer experience from restaurant to restaurant<sup>44</sup>.

### **Opportunities**

The fast food industry is rapidly changing today. With the increase of demand for healthier choices and consumer awareness of not only self-image but health concerns, a huge opportunity has arisen for McDonald's to capitalize on expanding their products to satisfy customer demand. Research by IBIS World has pointed out that one of the key external drivers for the fast food industry is increasing consumer awareness of health issues and the food served at fast food restaurants relating to obesity. With this in mind McDonald's has quickly responded to this shift by adding healthier menu options and as well as providing more accessible nutritional information through QR codes, which they claim to help their consumers make informed decisions.

McDonald's strengths has been in adaptability and with the changing habits of their consumers have not failed in accommodating this. With the economic recession it was found that many people opted to eat at home despite the cheap prices of quick service restaurants. This study conducted in the U.S. by IBIS World looks at this as a threat to the industry, however can also be seen as an opportunity to expand for McDonald's to home meal deliveries as its competitors such as Pizza Hut provides.

More opportunities will arise as societies change and distances becomes smaller between countries and cultures. Due to globalization, opportunities have arisen in expanding McDonald's market to new regions, cultures and customers that before were not accessible or marketable. This new expansion has created a huge opportunity in growth for the company and in being able to learn and adapt to different consumer habits and tastes.

One of the major opportunities however, that we see for McDonald's, that will also come from the increase of awareness in their consumers, is their need to focus on conservation and sustainability. With more companies shifting to be "greener" McDonald's has been the leader in this sense within its industry with its sustainability reporting. However, there are always opportunities to improve and this is where McDonald's can strive to set the path for the rest of the industry in how a successful fast food company can do the best it can in terms of conservation and sustainability if it includes its entire supply chain.

Awareness and consideration of the environment is not the only opportunity that McDonald's has, but the overall sustainability of food accessibility and affordability is an area in which they can succeed. With rising food prices around the world, McDonald's has been able to keep their food prices low and available and cater to the consumers of a low-income level. Despite the rise in prices all around the world in food prices, McDonald's has been able to keep their prices substantially low and continue to do so throughout the economic recession proving that there is an opportunity as a food provider if prices are low and quantity high.

### **Threats**

Though McDonald's is the industry leader among its competitors such as Yum!Brands and Burger King, there are areas in which their competitors perform better (Yum!Brand in China for example) and the number of competitors are growing. Now not only large multinational corporations own fast food restaurants, but small-medium quick service enterprises are emerging as well. With smaller fast food restaurants entering areas their advantage is their local knowledge and ability to connect with their customers more than a large business such as McDonald's can. Although in many areas the McDonald's



franchises allow for local owners, it still carries the weight and brand image of the larger conglomerate. This could potentially threaten their business if their brand has a negative association in the area.

McDonald's has had its share of media scandals and as we mentioned in the "Strengths" section above their ability to respond and create transparency can also be seen as a threat. With the lawsuits against McDonald's and media backlash about its unhealthy food or even in stories not related to McDonald's in particular but in general to food production such as a mad cow disease outbreak could potentially harm their product and brand image. There are already many campaigns and organizations against McDonald's because of the type of unhealthy lifestyle it promotes or its unethical animal practice, and can be an easy target because of its size. This remains a threat to McDonald's just like any other multinational corporation within our outside of this industry.

As campaigns against McDonald's arise more and more about their contribution to unhealthy eating habits, or marketing to children, as they were recently called out in through a large media hit after a nine-year-old girl approached the Board of Directors about their marketing towards children. Their inability to control these types of events makes them vulnerable and forces them to be reactive rather than proactive in addressing the media and can threaten their brand if not dealt with immediately.

Another threat that McDonald's must deal with as it continues to expand its market around the world is the difference in currencies and how that will affect their profit model. Not only the currency exchange but the taxation issues that recently they have been questioned for possibly avoiding their taxes in New Zealand through creative accounting which threatens their credibility in those countries. However, New Zealand was not the first to question the company of its cheating them of taxes, it has happened in Europe and the UK in which not only McDonald's, but many multinationals, avoid tax through royalties, that get funneled through to tax havens, such as Geneva<sup>45</sup>.

The overall threats of growing consumer concern for health, accountability, transparency and choosing local over multinational; must be addressed by McDonald's in order to remain the leader within its industry. The strengths and opportunities of McDonald's can be used as an advantage to address the weaknesses and threats posed above however they must be strategic and open minded to new areas.

### 3.1e McDonalds- PESTEL analysis



#### Political (IM)

Just as the market must respond to new trends in technological advances and rapid changes, regulation and legislation must also react to the changing times. McDonald's must comply and adhere to the individual state policies and regulations in each area that they enter and customize their business plan accordingly. In every area around the world the political power will also play a hand in how businesses operates.

McDonald's must be cognizant of how the character of communities could be affected through analyzing the policies provided by the region in terms of health, environment and worker protection. Understanding and adhering to local policies will enable McDonald's to clearly identify the needs of the community in that area, as well. In areas that have strict policy about using certain ingredients due to religious beliefs must be taken into consideration when creating a menu for these regions. However, in some cases it could be the other way around, in which McDonald's influences the policies put into place. In the case of the U.K., McDonald's has partnered up with KFC and Pepsi in developing a health policy on obesity. Though highly criticized, this demonstrates the areas in which McDonald's can either be influenced by policy or, in some cases, influence the way it is drafted or shaped<sup>46</sup>.

Taking this last point into consideration, it is important to identify exactly in whose hands the power lies: in the public sector, civil society or private sectors' hands. McDonald's must be aware of the political power of each area and respond accordingly with business practices that suit the community and do not disrupt. As they expand even further into underdeveloped countries however, appropriate policies may be set, but the government authority does not have control over enforcing them, this then underlines the fact that there is a power imbalance within the community. This could pose problems for McDonald's in terms of obtaining permits or finding acceptance from the local communities. In this way, McDonald's must analyze the political situation of the region before entering to ensure political support as well as community support. They must also be aware that in areas in which McDonald's is a symbol of the American culture, they must ensure that the sentiment towards the U.S.A. in this country will not harm their business or the society it is entering.

### **Economical (CW)**

While global economies overall struggled severely during the 2008 recession, with multimillion dollar industries collapsing, McDonald's seemed to thrive. Not only did McDonald's survive the longest recession since The Great Depression of the late 1920's, it managed to excel, with locations open for at least 13 months increasing sales an average of 4.6%. During this time, competitors such as Burger King were forced to sell, being absorbed by their investors 3G Capital. It has been noted by reputable financial analysts, such as Forbes, that a key element of McDonalds' business strategy was the defining factor of their success during this time<sup>47</sup>.

McDonalds' marketing strategy is grounded in their low prices, bringing in approximately 700,000 customers per day, with an average meal cost of 4.75 USD<sup>48</sup>. By providing meals at incredibly low prices, their accessibility to a wide range of consumers remains their differentiation factor. As the recession catapulted populations into new and unstable financial territories, McDonald's was able to acquire new consumers and access a new market. While competitors were suffering detrimental blows on the stock market in November of 2008, such as Burger King declining 24.6% since the previous year, McDonald's suffered a slight drop of 3.4%. As McDonald's maintains the lowest-cost producer within the market, this coupled with their ability to offer consumers the lowest prices in the market allows the enterprise to excel in a suffering global economy<sup>49</sup>. As the recession provided the opportunity for McDonald's to access new populations and markets, their social and cultural impacts expanded simultaneously.

### **Social and Cultural (CW)**

With access to new and formally unattainable customers during and after the financial crisis, McDonald's has expanded its' line of products to cater to its new consumer market. Historically regarded as a place for young people and individuals belonging to the lower rungs of socio-economic status to frequent, McDonald's began providing products that appeal to a different customer profile by marketing new products such as premium coffee often compared to Starbucks' quality. With the move to include nutrition-conscious consumers and clientele that might be considered to represent 'higher socio-economic' communities, McDonald's has begun to offer a range of fruit smoothie and frappe products to appeal to the 'new customer'. This shift has altered the average customer profile as well as the overall culture of McDonald's.

Once, and still, a location for a quick, cheap meal, McDonald's is transforming their internal culture to appeal to the premium coffee-drinking, smoothie-loving, salad eating business types. No longer is McDonald's considered a place solely for young college kids and low-income families, but is now regarded as a place for various types of people. In addition to restructuring their menu, offering free wireless internet (WIFI) encourages working types to frequent the enterprise. Not only does WIFI en-

courage customers to come in the doors, but it encourages them to stay longer, and in turn, consume more<sup>50</sup>. While it's highly unlikely that McDonald's will evolve to a restaurant that provides luxurious cuisine for exclusive clientele, it is evident that McDonald's is broadening their market on a massive scale. Expected to open one new location daily over the next four years in China, it is clear the McDonald's has no plans to scale down market domination anytime soon. This type of growth implies impact on the direction of technology, environmental management, and legislation within the market.

### Technological (DS)

Although the social and environmental challenges facing many industries, such as the fast food industry are mounting, fortunately there has been a parallel development of technology and innovation which may play an important role in helping to overcome these challenges. That is, while business faces new unprecedented challenges, it also has a new range of technologically driven solutions potentially at its disposal. For example, modern information technology systems are already helping industries become more efficient in their logistical operations enabling corporations like McDonald's and its suppliers save time, money and environmental resources. The internet and social media, while in some ways can be perceived as a threat to business through increased transparency of bad business behavior, also represents a much greater potential for companies to connect and have beneficial dialogue with their customers to understand and communicate the value of sustainability practices.

Additionally, innovation for the fast food industry is not confined to the digital world. Innovation is also occurring on both sides of companies like McDonald's in the value chain. Suppliers, such as some food producers, are developing new production methods that promote sustainability by doing 'more with less' or producing without the traditional negative externalities. For example, the development of vertical farming and aquaponic systems. Systems which represent closed circuit food production methods which eliminates nearly all waste and many of the environmental problems caused from conventional industrial agriculture such as deforestation, water wastage and the need for inorganic chemical application. However, the role of technology in the food system can be a controversial one and arguably represents a major threat, as in the case with the use of Genetically Modified Organisms. Nevertheless, the food industry still has incredible room for new product development that could revolutionize food production altogether. For example, in-vitro meat production currently being developed which uses stem cell research to essentially grow real animal meat protein without the animal. Similarly, there is also huge potential to satisfy the world's growing need for protein through further research into the plant resources already available. It is estimated that only 8% of the world's plant protein have been researched as potential meat alternative food that are high in proteins<sup>51</sup>. Therefore, given the existing challenges with conventional food production methods and products the food industry is a sector which is ripe for reinvention through the advance of technology.

### Environmental (DS)

As discussed in section 1, given the future environmental challenges ahead, continuing a 'business-as-usual' approach in the 21st century is not an option. Planetary resources are running out and the risks associated with doing nothing are too high. As consumers, industry standards and regulations adjust to the new environmental rules of the game, it will become increasingly difficult for businesses to hide from their environmental impacts. Businesses must therefore learn to operate in order to mitigate damage or adapt to these changing conditions.

This is the business situation which McDonald's now faces. It is likely that businesses that do not address their impacts on issues such as climate change and resource efficiency will not survive in the

market in the long term. However, the growing awareness that we are living on a planet with finite and fragile environmental resources represents not only a threat to business but also an opportunity. That is, those businesses that can provide solutions to our environmental sustainability challenges will be rewarded in the market, not only with a continued license to operate but also greater returns from increased efficiency and a competitive advantage. Relative to its competitors, McDonald's seems to have started embracing the realities of doing business on a resource restricted planet. As we will see in the following analysis of environmental impact, McDonald's still has a long journey ahead if it is truly going to support environmental protection and reduce its core impacts.

### Legal (IM)

Due to legal suits such as *Pelman v. McDonald's Corp.*, a lawsuit in which girls claimed that McDonald's had deceived them into becoming obese, McDonald's has had to respond through action. This lawsuit specifically affected McDonalds' image and has forced them into responding by providing healthier options. These legal suits that have been brought against them will shift the way they operate, market and perform as a business in order to satisfy their customers and maintain their credibility. They have improved dramatically in their messaging and creation of healthier options as a business, however, the franchise has yet to address issues of animal welfare that remain a topic of contention among various stakeholders. McDonald's will need to continue to respond and maintain an open communication line between itself and its stakeholders in order to address these legal implications and recover from any reputational damage that they could cause<sup>52</sup>.

## 3.2 What does McDonald's represent in terms of environmental impacts?

### (DS)

When evaluating the environmental impact of McDonald's we must first address the issue of scope of responsibility. Depending on which scope or perspective we take leads us to two very different evaluations of McDonalds' environmental impact. The first perspective we will use is the organizational perspective. This is the perspective where the organization primarily sees its environmental responsibility limited to just its own processes within the value chain. That is, whatever environmental impacts came before or after its processes within the value chain are ultimately not included in the organization's environmental impact accounting. Generally, this is the perspective currently held by McDonald's. In comparison, the second perspective we will use is the life cycle analysis perspective, which has a much broader scope and considers responsibility to be inclusive of all the impacts that came before and after any given step in the value chain. We will now discuss McDonald's impacts according to these two different perspectives.

### 3.2a Environmental Impact from McDonald's Perspective

When we review the available information on the McDonald's website regarding environmental responsibility and impact it is easy to get the impression that despite popular beliefs, McDonald's may not be so bad for the environment after all. In terms of sustainability, McDonald's is recognized as an industry leader relative to the other major fast food corporations<sup>53</sup>. If you spend enough time reading the available information about its environmental programs and initiatives, it seems that McDonald's is making considerable progress reducing its environmental footprint. However, the scope of this reduction is primarily focused on effectively managing energy use, conserving resources through more efficient design and logistics, and by addressing water and waste management issues within its restaurant<sup>54</sup>. For

example, Between 2008 and today, almost 600 McDonald's restaurants in Brazil have reduced their environmental impact and improved restaurant profitability through the "Programa de Energia ABC+"<sup>55</sup> (FOOTNOTE45). The program improves energy-related practices in restaurants, applies new technology and promotes better management of commercial energy contracts and agreements. McDonald's are actively introducing such energy efficiency programs in many different markets around the world.

Similarly, McDonald's has made significant progress with regard to the environmental impact of its packaging. "An average meal" in the 1970s—a Big Mac, fries, and a drink—required 46 grams of packaging; today, it requires only 25 grams, allowing a 46% reduction"<sup>56</sup>. In addition, McDonald's eliminated the need for intermediate containers for its soft drinkers by having a delivery system that pumps syrup directly from the delivery truck into storage containers, saving two million pounds of packaging annually<sup>57</sup>. Through innovative initiatives such as these and its drive for efficiency, McDonald's has been able to reduce its environmental impact significantly, preventing wasted resources<sup>58</sup>.

McDonald's does however, unlike many of its competitors, also extend some environmental responsibility beyond its in-house processes in terms of its sourcing. For example, 99 percent of McDonald's fish is sourced from Marine Stewardship Council fisheries and also in Australia, New Zealand and Europe all its coffee is certified Rainforest Alliance and UTZ certified. Similarly, McDonald's has made commitments to sustainable land management with regards to sourcing of beef, poultry, coffee, palm oil and packaging. Most notably, McDonald's is also a lead sponsor for the Global Roundtable on Sustainable Beef.

Such environmental initiatives as the examples mentioned above undoubtedly represent progress. Despite these initiatives, even within this scope of responsibility, McDonald's still has a considerable negative impact. For example, walk around the centre of any major city or along a highway and as a result of McDonald's fast-food eating culture, food on the go, all too often means littering of food packaging. However, both this progress and negative impacts within this organizational scope can be put in more relative terms when we take a step back and explore McDonald's impact from a broader perspective, the impact of one of its core products, the hamburger.

### 3.2b Environmental Impact from a Life Cycle Analysis Perspective (DS)

Although McDonald's is actively pursuing sustainable land management practices through its sourcing, McDonald's does not directly recognize the environmental footprint of its products. Similarly, it does not discuss one of the major threats to our global environment, a threat which is a key driver of climate change and other environmental problems. That is, livestock production and specifically, cows. No where on McDonalds' global or regional sites does it recognize the global challenge of meat consumption. While McDonald's is a founding member of the Global Roundtable on Sustainable Beef, the question remains, how sustainable can beef be made? How far can we redesign the biological processes of a cow? Especially given the scale of this 'sustainable beef' that McDonald's requires. For example, a supply that needs to keep up with McDonald's plans for opening one restaurant in China per day for the next three years. With such growth in absolute sales and supply, how effective can this Global Roundtable on Sustainable Beef be? For McDonald's, it seems the environmental implications of increasing the sales of its core products and therefore further increasing the sustainability challenge of making beef sustainable is not directly on the table.



Americans alone consumer one billions pounds of beef at McDonald's in a year - five and a half million head of cattle<sup>59</sup>. Globally, McDonald's sells more than 75 hamburgers every second<sup>60</sup>. That is 6,480,000 hamburgers every day and over 2.3 billion hamburgers every year. From a life-cycle perspective, we can see McDonald's enormous scope for the environmental impact from its products.



We will now try and get an idea of what exactly the environmental impact of 2.3 billion hamburgers a year looks like. Firstly though, we need to turn hamburgers into kilos. The beef patty of the BigMac weighs approximately 200 grams. However, many of McDonald's burgers use two beef patties, such as the BigMac and the Double Quarter Pounder. We will therefore use an average amount of beef in a McDonald's hamburger to be 300 grams. This makes approximately 3.5 hamburgers per kilo of beef used by McDonald's. 2.3 billion divided by 3.5 and we have approximately 700 million kilos of beef purchased by McDonald's each year.

As the exact footprinting of meat will depend greatly on many factors in the production process, we have used some approximate figures. According to *The Gates Notes*, 1 kilo of beef requires on average 150 square meters of land, 15,000 liters of water and 27 kilos of Co2 equivalents<sup>61</sup>. Therefore, the three main environmental resource impacts required to supply 700 million kilos of beef that goes into McDonald's 2.3 billion hamburgers looks something like this.

Firstly, 105000000000 square meters of land, or approximately 105,000 square kilometers of land. This means that more than the entire land mass of Portugal is required just for McDonald's yearly production of beef.

Secondly, 10500000000000 liters or approximately 3 billion gallons of water per year. In other words, 100,000 olympic sized swimming pools.

Thirdly, 18900000000 kilos of Co2e or approximately 20 million metric tons of co2 per year. Or relative to co2 emissions from worldwide motor vehicles, the beef production that supplies McDonald's emits the same amount as 2% of all the emissions from all the cars in the world, which currently emit well over 900 million metric tons of CO2 each year (or 12 millions cars on the road a year)<sup>62</sup>. As we can see from the results of these figures, the environmental costs in order to supply McDonald's just with its beef, let alone all its other inputs, is enormous. Moreover, if we go deeper into what these figures also represents we can find many other serious environmental and social impacts which are associated with beef production.

While we have estimated that it takes more land than the entire size of Portugal to supply just McDonald's with its beef to make hamburgers, what this land requirement also is likely to represent is soil degradation and habitat conversion. Over two-thirds of the world's agricultural land is used for maintaining livestock. One-third of this land is suffering desertification due in large part to overgrazing of livestock<sup>63</sup>. So once land (i.e in this example Portugal) becomes too degraded for either grazing or growing cattle fed crops, more fertile land is require to keep up with demand. Unless sustainable agri-

cultural methods are employed, natural habitat is typically cleared to obtain more fertile land, damaging biodiversity of the area and sometimes displacing of local communities. It should be noted that, the social impacts of the industrial agricultural system which McDonald's directly supports, does not just arise from its sourcing of beef. For example, it has been reported that the soya that is fed to McDonald's chickens, which is supplied by Cargill (one of the world's largest agricultural commodities corporations), results in the clearing of the Amazon in Brazil and the loss of eco-services which the communities relied on for their livelihood <sup>64</sup>.

Not only does the industrialized food system (i.e. from agricultural commodities giant to fast-food giant) have significant impacts because of how the crops are grown, but it also raises the question of the indirect impacts from how the food from those crops is later used. It is cited that factory farms or cattle lots use more food calories than they produce<sup>65</sup>. To this effect, globally, one-third of the world's cereal harvest is fed to farm animals<sup>66</sup>. Does it make sense to be creating so many negative environmental impacts to grow grain only to feed it to cattle instead of using it directly for human use? This question is especially valid when we remember there are still around 1 billion people suffering from hunger and undernourishment. For example, second only to the infamous American corn industry, the soy industry in the United States is one of the world's biggest<sup>67</sup>. Yet 95% of the soy grown in the United States is used as livestock feed, mostly to cattle factory farm operations<sup>68</sup>. As a result of this grain-fed meat production system, it takes 16 pounds of grain to produce one pound of beef<sup>69</sup>. Additionally, the grain fed to animals in today's industrial food system represents another threat, the promotion of mega monoculture farming<sup>70</sup>. Farming that exists specifically just to produce as much grain as possible to feed to animals or be used in other processed food or even used in biofuels. As this grain is no longer being eaten by humans, the key plant genetic sought is commonly quantity. So not only does the industrialized food system promote farming of just one or two different plant species but it also promotes the farming of genetically similar varieties within a single plant species (i.e. genetically modified corn). Industrialized farming typically impacts not only biodiversity surrounding agriculture practices but also the ecosystems that exists within the agricultural context.

If meat was not demanded on such large scale by corporations like McDonald's, the question remains, what positive environmental and social benefits could be achieved with this land when not used to grow corn and soy to feed to cattle to produce beef to make into Big Macs with two beef patties?

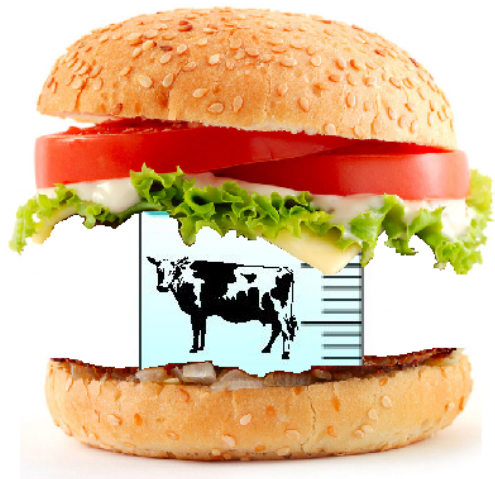
Despite this question regarding the environmental, social and economic logic of factory farming yet to be answered, alarmingly, factory farming operations are increasing throughout the world<sup>71</sup>. And with this expanding production method comes even more negative environmental and social impacts. Given the dramatic and fundamental change in conditions which animals experience living on a factory farm, massive quantities of antibiotics and growth hormones are used to counteract all the negative impacts on the speed and 'quality' of production<sup>72</sup>. This mass injection of pharmaceutical chemicals into the food system not only has a harmful effect on the animal's welfare (i.e. unable to walk), and the surrounding environment, but it also has lead to human health impacts, from E-Coli outbreaks and cancer<sup>73</sup>.

Finally, another major environmental impact of the factory farms which McDonald's sources nearly all its meat and dairy is pollution. For example, not only is the problem that beef production for McDonald's drains a 100,000 swimming pools of freshwater per year, but when that water comes out the other side of the process, unless probably treated, will be highly contaminated with all of the additives and animal manure. US animal feedlots produce 100,000 metric tons of manure per minute, which raises questions if even McDonald's with its push for sustainable beef has really been able to find suppliers that are able to properly treat such a huge quantity of manure. Similarly, while we estimated that the



beef production required to supply McDonald's per year emits as 12 million cars on the road per year, it is not only greenhouse gases that pollute the air, factory farming also has impacts on air pollution in terms of odor and dust from the manure which has been documented to have health implications for the surrounding communities<sup>74</sup>.

In summary, what this section has revealed is the depth of environmental impact which it is possible to attribute to McDonald's, either directly or indirectly. However, this depth of impact is true for most products from mobile phones to cars, from paper to timber and from clothes to household cleaning products. Therefore, until what point in the life-cycle approach should we hold McDonald's accountable? Is it reasonable for McDonald's to take responsibility for the entire life-cycle of its Big Macs? The possible answers to this question will be explored in the later sections of the report.



### 3.3 What does McDonald's represent in terms of nutrition, access, and food security impacts? (CW)

#### 3.3a Nutrition

Availability of nutritious food varies depending on socio-economic status, culture, and location. As income plays a significant role in the scale of availability, a community's ability to consistently access and obtain nutritious food is greatly dependent on income. Culture plays an integral role in dictating the diet of communities, regions, states, and nations. Micro-cultures establish the foundation of individuals diets which exist within small communities. Income is interconnected with culture as individuals purchase what is financially feasible within the culturally acceptable diet. These diets are not necessarily inherently balanced or wholly nutritious. As McDonald's plays an integral role in the nutrition and well-being of millions, they have established three areas of influence: Quality, Choice, and Nutrition.

McDonald's reaps a majority of its success from its ability to offer large quantities of inexpensive food, quickly. Balancing inexpensive, large quantities, of **nutritious** food, quickly is an art that McDonald's has yet to master in its entirety; however, the company is making a genuine effort to achieve this feat.

The "model" McDonald's customer seeks two qualities from their experience: quick service and food satisfaction. The concern of the average customer is not nutritional value or long-term health impacts of McDonald's food consumption; however, McDonald's has implemented procedures and programs to address nutrition and well being of their customers. By providing customers with the choice to elect quality and nutritious food, McDonald's acknowledges and addresses the various health epidemics that we are confronted with on a global scale.

As McDonald's recognizes that its customers demand quick service and quality food, they understand the importance of providing nutritional information about their food. This allows the customer to make informed choices. This is a key element in our theory surrounding sustainable diets and ultimately, the upheaval of our currently broken food system. Consumer education is crucial to understanding the fundamentals of a sustainable diet. As previously stated, a sustainable diet is comprised of various elements, all of which require some education and understanding of procurement, supply chain impact, and of course, nutritional value.

McDonald's focuses specifically on educating and communicating the importance of proper nutrition to their young clients and their parents. Marketing to children is an area that McDonald's has been criticized for on various occasions. Using toys to market to children has been both a strong point and weakness for McDonald's as critics have recognized the perceived manipulation of children for McDonald's benefit<sup>75</sup>. Currently, McDonald's is working to access the children's market in a positive manner by educating them and their parents about the nutritional value of their choices.

As food related health risks such as diabetes and obesity ravages global communities, and developed nations specifically, McDonald's acknowledges their role in this regard. They have pledged, as a corporation, to contribute to efforts by governments, NGO's, and customers to combat rising health risks. Through commitment of positive contributions on various levels of operation, McDonald's declares that they understand the severity of these issues and declare to address them in partnership with other active parties.

Seeking counsel from their internal Global Advisory Council (GAC), McDonald's continually improves their strategy to address nutrition and wellbeing. They achieve these efforts while simultaneously maintaining and meeting demands of their consumers, respecting varying cultural markets globally. As a result of their counsel on behalf of GAC, McDonald's has improved their nutritional labeling, established systems to monitor their progress, and acts as a leader in the industry in this regard. Encouraging children to eat more nutritiously, the company has established a children's well-being platform titled "What I Eat, What I do"<sup>76</sup>. Initiatives such as this will maintain McDonald's as a leader in the industry as we make a global shift towards sustainable food systems.

### **3.3b Relation to global food security: Availability and Access?**

Availability and access are two key elements of global food security. Though McDonald's lacks nutritious products, an element central to food security, it is well known for its availability and accessibility, both financially and physically. The McDonaldization of the fast food industry has revolutionized elements of the food system that have been adopted by various companies across the board. Not only has McDonald's standardized the market and food service, but their presence is overwhelming across the globe. In the United States, South Dakota is the only state in the lower 48 that obtains land that is 100 miles from a McDonalds<sup>77</sup>.

This is a key strength for McDonald's and, in turn, its consumers. Making resources available is an integral element in addressing food security and while McDonald's has generous room for improvement with regard to making nutritious food available, they have great potential to be a catalyst for change within our food system. In addition to their availability, they provide access to food for communities who lack access to other sources of food. While we would argue that there are both pros and cons to McDonald's



strategy with regard to access, it remains that they have the ability to feed large quantities of the global population that would otherwise be without a food source. As McDonald's feeds 1% of the global population per day, serving 75 hamburgers per second<sup>78</sup>, they maintain the ability to dictate individual, communal, national, and global diets. With this type of impact, McDonald's can utilize their position to create the necessary shift to sustainable diets and ultimately, a sustainable food system and global food security.

### 3.4 Cultural Impacts: Influential or Adaptable? (IM)

There are many ways a company can influence a culture, and as the largest fast food giant in the world, there is no doubt that McDonald's has a significant impact on the culture of many societies. We will explore how McDonald's has influenced cultures and in ways that it has been impacted itself by different cultures.

#### What McDonald's represents to the world

McDonald's slogan, "I'm Lovin' it", can be found in over 100 different countries around the world and translated into 20 different languages. But is the world really, "Lovin' it"? The pervasive golden arches of McDonald's, as we have mentioned previously, in many countries, have come to represent the American cultures infiltration across the globe through "McDonaldization". France, for example, a country where food and culture go hand in hand as a proud representation of their cultural identity, strongly resisted McDonald's entering its country. It was said by Le Monde, in an article in Times Magazine that, McDonald's "commercial hegemony threatens agriculture and (its) cultural hegemony insidiously ruins alimentary behavior - sacred reflections of French identity". When McDonald's enters a new area there are many implications that come with it: the standardized menu, consistent décor and products, and sometimes mistakenly, the assumption that the community is in need for a quick service restaurant of cheap food.

As we have mentioned in the socio-cultural section, in rural areas or relatively "untouched" areas of the world a cheap food restaurant such as this will have an impact on the culture of how and what type of food is consumed in the area. As they expand their reach, their message that they sell along with their product also become a part of what society sees as acceptable. By using advertisements with celebrities or integrating different ethnicities intermingling for example, it will change the perspective of

what mainstream media can have on a society. In this way McDonald's has been able to influence society not only through its product but by the message it sells with its project which can create new issues within a society if it does not reflect the same values or identity as before<sup>79</sup>.

Returning to the French example, there were two ways that McDonald's could have approached the resistance from the French: 1) to abandon all notions of entering France and the potential new market it would provide; 2) disregard the resistance and enter anyway but adapt to meet their needs. This is where it can be questioned as to whether McDonald's influences the culture of a society or whether it is the culture that influences McDonald's business practices. In the end McDonald's chose option 2 and entered France but adapted to their culture. Immediately the iconic image of Ronald McDonald was replaced with Asterix, a popular and recognized cartoon in France, thus adapting to what is culturally acceptable in the area. Aligning their products, characters and palates with local characteristics is a defining factor of McDonald's business model. This bears to question again, if McDonald's is simply adapting to the culture or influencing it; and what we believe is that it is both. To a certain extent McDonald's must adapt to the local culture in order to cater to its consumers, however, just through its presence alone and the operations of its business, it will influence cultures through the expectations that it creates within these communities of quick and cheap food and impact how local businesses must modify or adapt to a large competitor.

### 3.4a Marketing Culture

Their marketing strategy has been successful in targeting their consumers from a young age as well as creating new clientele bases of different regions. Through these specific marketing schemes they have greatly influenced the current American culture and continue to do so as they spread their message across the globe.

McDonald's has been criticized for their direct marketing towards children and is making an effort to change this. As the largest distributor of toys in the world, McDonald's is able to use these simple marketing techniques to impact consumers from a young age through strategic partnerships with other large conglomerates such as Disney<sup>80</sup>. Characters of popular movies are emulated by children and should be considered when creating a marketing campaign of what types of values these characters represent and how an American-created movie will have an affect on a child of a non-American culture or that has not been exposed to these before. As we mentioned above, these types of introductions through marketing will have an affect on the social norms of a society and what is deemed as appropriate or not. These cross-cultural differences that in some ways are addressed through the localization of products, still pose an impact on what is made available to children that were not before and if it is culturally acceptable to open these doors that are not aligned with the host culture. This however could be seen as an opportunity, if culturally appropriate guidelines are addressed. For example, what happens when a fast food giant such as McDonald's, that 20% of its sales come from the selling of Happy Meals, begins to switch from distributing toys to educational books? How will this have an impact on society and children? In the U.K., McDonald's will begin to distribute over 15 million books through their Happy Meals over the next year in efforts to create a new and better image for the company<sup>81</sup>. In this way, McDonald's strengths lies in its reach that it has into the community as long as the material it distributes is culturally appropriate. By measuring the literacy rate, and working with local educational institutions and NGOs, McDonalds marketing team this could be a successful program to begin to implement all over the world.

As criticism continues over McDonald's marketing to children, they have opened their doors to a new target market: the millennials. An age group that seems like it would be easy to penetrate as it was within their childhood that McDonald's grew to be what it was today, and many children in the U.S. were brought up with McDonald's associated with toys, play bins and Happy Meals. However, the opposite is true and the loyalty of the millennials is not what McDonald's had hoped for. What is it that Millennials expect out of McDonald's? *USA Today* suggests that McDonald's look at this target audience in a new way:

- Create Craveable Food: Begin to move away from just the basics and to food that is simple yet fresh.
- Embrace Causes: Millennials want to feel a part of something; they are the "do-gooders" and follow trends.
- Compete with Fast-Casual: Continue to create the fast food experience but at a higher quality.
- Reinvent Breakfast: Keep things fresh and create new habits.
- Fix the Nutritionals: Create healthier choices and be more transparent about ingredients.

Looking at these suggestions according to *USA Today*<sup>82</sup> it is evident that the way McDonald's does business will need to change in order to satisfy its new customer targets. Although McDonald's is a mature business, it needs to continue to innovate through its messaging and marketing in order to expand its consumer reach. In this way McDonald's adapts to the culture of the society in order to meet consumer demands, however, as it opens more businesses worldwide, it is bringing along its culture as well and influencing different societies just through its presence alone.

### 3.4b Standardization and Flexibility

We have talked a bit about the inherent "Americanized" culture of McDonald's and its identity that it carries with it, however their franchising model and business model has allowed for them to also create



flexibility in its products and practices. With about 80% of McDonald's restaurants independently owned, the McDonald's business model and identity has been duplicated many times over. Though they ensure standardization of their classic menu items, they have adapted to local tastes and preferences in many locations. For example, in Hawai'i, a typical breakfast item is spam, eggs and rice which caters to this specific local palate, they serve McLaks in Noway, which are salmon burgers and just about in every country have different menu items. In this way, McDonald's has been able to create consistency in its standard products while being able to satisfy their local customer tastes<sup>83</sup>.

Local tastes and products, however, aren't the only area in which McDonald's operations individually adapt to its customers' needs. McDonald's must take its stakeholders' concerns into account and react accordingly. A specific example of not only how they were able to change their operations, but were able to influence the entire industry, was an example of how McDonald's took animal cruelty "off their menu". In an incident in which one of their suppliers of meat of conventional farming techniques was found guilty of the unethical treatment of its animals, McDonald's accordingly responded in banning the use of this supplier and furthermore, of the practices condoned by them. This response to its stakeholders' concerns has forced McDonald's to react appropriately in order to maintain its reputation, and as an externality of this act has unknowingly created a shift in society in food production awareness.



Though there are many factors that come into play in the awareness of society of ethical food production, with McDonald's shedding more light on the matter, it begins to open up the conversation to continue to ask questions about the appropriate measures of food production<sup>84</sup>.

The physical presence of McDonald's can also have an affect on the culture of a society. They have a somewhat standardized look and required space, as well as colors. It is important to take into account when moving into towns that have specific characteristics that make it unique, how the presence of a new building will be looked upon. Besides the city ordinances and building permits, McDonald's will bring in it's culture of a multinational corporation, quick service restaurant. In a community full of small and medium enterprises and local grocery stores it can be a threat on the threads of the community in which it operates. An example of this was in Montreal, where residents opposed McDonald's plans to stay open 24 hours because they felt like it would draw more traffic and noise at late hours in a residential area. Though completely within county ordinances and regulations, residents felt that enough notice was given and that McDonald's was bullying their way into their small community. While some just opposed the 24 hour plan, others felt McDonald's had no place in their town in the first place, calling them a "symbol of sloth and ill health and diabetes and bad eating habits." Instead they had proposed to 'green' the area, rather than develop it, however in the end, due to the zoning ordinances, McDonald's was in the right. This general resistance demonstrates a sentiment that in small rural areas McDonald's poses a threat on the characteristics of the community and the "McDonaldization" culture that comes with it<sup>85</sup>.

As we look at how McDonald's is perceived externally it is important to analyze the internal perception. One of the most important stakeholders to McDonald's is its employees. McDonald's currently employs about 1.8 million people worldwide, which is larger than the entire population of the small country of Gambia. With its many independent franchises and employees, McDonald's must ensure that their employees have a standard quality of service provided and given. McDonald's has created its own corporate culture within its business to try and grow its employees through different training programs, one in particular being the Hamburger University.

One of their keys to success, "Act like a retailer, think like a brand" is an example of how McDonald's focuses on its long term mission and how it aims to gain loyalty among its customers through selling not just their product, but their brand. In efforts to educate their employees on the important values of McDonald's and build on restaurant management and operation skills, McDonald's has created a university in which it offers the opportunity for its students to: "learn professional training and operation staff design, deliver and implement the core curriculum throughout the system using a variety of learning techniques, including elements of self-study, e-learning and classroom training.

Students are trained from the time they step into the restaurant...preparing themselves for continuous learning at our Regional Training Centers and Hamburger University."<sup>86</sup>. In this way McDonald's is able to empower their employees to create champions within their organization that have the ability to move up and be trained in the values of the company. Beginning in 1961, Hamburger University graduates more than 5,000 students every year. McDonald's capacity to create a university for their



employees and continue to educate them to encourage them to grow and give them the skills need to manage and operate their business is an example of their scale at which they are able to operate and be successful in educating and training services. Having students coming out of their university to then work for them encourages a stronger unity within their business and those that complete the course will feel more connected with the organization to continue on, thus encouraging a corporate culture within it that creates loyal stakeholders in the upper management level. Having happy employees that also are educated will reflect the way in which each franchise or business operates and serves its customers thus creating a better atmosphere within itself.

### 3.4c Consumer value

The consumer value of McDonald's is something that has been developed over time. As our society has advanced technologically, the private sector has had to adapt and continue to change along with it. Thus, quick service restaurants became more of a phenomenon as technologically made things easier and people looked for things that were efficient and less time consuming. Our "on-the-go" mentality was capitalized with the markets response of consumerism, and quick service products, and has thus been ingrained with valuing time and quantity over quality. McDonald's has capitalized on this specific consumer driven value and will continue to do so, as long as the customer need is there. However, as we have talked about extensively, there is now a shift in consumer value today, especially in the market of the millenials and overall awareness of health and thus forcing McDonald's to once again adapt to its consumer needs. But what does this mean to a quick service restaurant that's core business is founded on quantity and efficiency over quality?

The McDonalds' business model will need to change while maintaining their reputation for efficiency and quantity. As long as there is a demand from their consumers, there will be a response from McDonald's to meet this demand. In this way much of the way McDonald's operates has to do with the behavior of its consumers and stakeholders and what they demand. The question then becomes to what extent can consumers change their behavior to influence a company and at what tipping point will a business be able to adequately address these needs without compromising their business or societies values.

## Section 4: Concept Compatibility, McDonalds and Sustainable Diets?

### 4.1 Evaluation of McDonalds against the MD-SDI

Ratings	
0	No performance
1	Very low performance
2	Low performance
3	Adequate performance
4	Strong performance
5	Very strong performance

#### 4.1a Evaluation against Index Criteria 1 : Protective and Respective of Biodiversity and Ecosystems (PRBE) (DS)

As discussed previously, evaluating McDonalds' environmental sustainability will depend on which scope of responsibility we hold McDonald's accountable. For the purpose of this evaluation, we will consider points from both scopes in order to decide on a final rating for its performance on the given aspect of environmental sustainability. While credit is given where credit is due, if we are taking in both scopes of responsibility, the final ratings will nevertheless be weighted according to the scale of impact. To this effect, given the weight of the level of impacts arising from the life-cycle perspective, it will be these points that will dominate across most of the below evaluations.

Firstly, with regard to **water efficiency**, because of the high water requirements for the majority of McDonalds' core food products, the current McDonald's diet does not represent a sustainable use of water. Our global fresh water supply is shrinking and we need to reevaluate how much water we eat. For example, a pound of meat requires fifty times as much water as a pound of grain<sup>87</sup>. The meat production system that McDonald's is currently supporting is failing to consider these inefficiencies. If industrialized meat production continues to grow, at some point, logic will have no choice but reveal the importance of sustainable uses of water in our diets. Put simply, water shortages equal food shortages. For the above reason we have awarded McDonald's with a 0.

Secondly, with regards to level of sustainability of **land management** represented by the McDonald's diet there is notably some positive sourcing initiatives with regards to some product inputs such as certified Rainforest Alliance coffee and some "Flagship Farms" advertised on their Best Practices.com that shows that McDonald's are using suppliers who promote more sustainable land use. However, the majority of its core inputs still come from non-sustainable sources. For example, while there is a lot of promotion by McDonalds of their pursuit of sustainable beef through the GRFB, according to the most recent news update on the GRSD website, as of 31st May 2013, is that "GRFB Working to Define Sustain-



able Beef”. Therefore, while McDonald’s is trying to take leadership on the impacts of its sourcing on land resources, the reality is, as long as the McDonald’s diet still supports the industrialized and controversial soy and corn crops and the animal factory farming system it will not be able to have positive impacts for the sustainability of land resources given the issues of deforestation and soil management and erosion still associated with these practices. For these reasons, we have awarded McDonald’s with a 1.

Thirdly, with regards to environmental **pollution**, the McDonald’s diet still represents major impacts on our land, water and climate resources. The industrial agriculture systems that McDonald’s support involves heavy application of non-organic agrochemicals, such as pesticides and fertilizers. Such chemicals not only pollute the land but can run off into water resources along with the other byproducts of the industrial agriculture system such as animal manure, growth hormones and antibiotics. However, there are some “Flagship Farms” promoted by McDonald’s, such as a dairy farmer in Holland which is able to sustainably manage pollution such as manure and ammonia. In addition, McDonald’s increased efficiency with packaging design and energy management in some of their restaurants has seen a significant reduction in the amount of pollution associated with the distribution of their food products. However, reductions in greenhouse gas emissions from their improve restaurant energy management programs is overshadowed by the amount of greenhouse gas emissions associated with the huge quantities of meat they buy and sell. For the above reasons we have awarded McDonald’s with a 1.

Finally, with regards to **biodiversity**, the McDonald’s diet represents many negative impacts because of the severity of the harmful environmental implications already discussed previously. For example, a diet that pollutes freshwater and marine environments, a diet that requires extensive clearing of natural habitats, a diet with heavy emissions that contribute significantly to climate change, and a diet that promotes an erosion of genetic diversity within the plant and animal species which we rely on for our food. However, credit must be given for McDonald’s leadership with regards to its sourcing of fish that meets certifications from the Marine Stewardship Council. This certification represents a sourcing of seafood in a sustainable manner that helps to protect the balance of biodiversity of our oceans, indeed a critical issue given the importance of the oceans as a global food source that millions, especially in the developing world rely on. Additionally, we also note the value of McDonald’s sourcing its coffee from Rainforest Alliance certified sources but it should be noted this sourcing only happens in some of McDonald’s markets. Given the above reasons we have awarded McDonald’s with a 1.

*Overall McDonald’s scores an average of: 0.75 against the MD-SDI Environmental Criteria.*

CRITERIA 1: PRBE				
INDICATORS	LAND MANAGEMENT	WATER EFFICIENCY	POLLUTION	BIODIVERSITY
Verifiers	Acreage of land used	Gallons of water used	Tons of pollution emitted	All verifiers applicable
	Acreage of deforestation		Tons of GHG	
	Farming techniques (certifications)			
SCORES	1	0	1	1
<b>AVG SCORE</b>	<b>0.75</b>			

## 4.1b Evaluation against Index Criteria 2 : Culturally Relevant (IM)

Our established markers for criteria 2 for measuring cultural relevance are through the following: cultural acceptability & culturally integrated or appropriately adapted. Though complex, we believe that these two areas will attempt to capture the data needed to ensure this. The verifiers will differ in each area and should be locally identified as “not applicable”, if irrelevant to the circumstances.

Because the measurement of whether or not something is culturally relevant can be subjective, we have created specific verifiers that we think will help create an idea of whether or not this indicator is being met or not. Below we will explain in detail how each verifier measures the indicators and our evaluation of McDonald's. It is important to note that these indicators are not looking at a specific product but at the overall diet or menu offered by a business. This index can be applied to suppliers of food through restaurants or supermarkets but within our project in particular it will be focused on the quick service industry and McDonald's. It should also be noted that with this criteria, we are looking at McDonald's as a whole, which then means that it is a general grade overall instead of analyzing each individual business by region or franchise. We chose to look at the entire business rather than on an individual basis within the corporation to get a better idea of how they are doing overall, however we will use specific examples to demonstrate their strengths and weaknesses.

### Culturally acceptable

In attempt to verify whether or not a diet is culturally acceptable there are various factors that will have to be taken into consideration and will vary widely in each case. This process should be done locally and decided if applicable or not. In order to try and create a complete list of possible factors that would have an impact and in measuring if culturally acceptable we decided to ask the following questions: *Will their presence change the existing culture and have possible external impacts? Are the beliefs and local customs respected and applied? Is there a consumer demand for the product?* By asking these questions we are able to further analyze our indicators at different levels in order to determine if appropriate or not. We will explain this process through analyzing how McDonald's scored as a business overall.

In rating McDonald's against this criteria, we asked the three questions above and decided that in just about every case no matter where in the world, McDonald's presence will change the existing culture on the area in which it enters. Because of its inherent culture of quick service and *McDonaldization*, it will create unexpected impacts that will be difficult to measure but which we think are important to take into consideration and addressed.

In one specific example in the Pacific Islands, the entrance of imported and processed food has shifted their entire food culture from a traditionally balanced and localized diet of fresh fruit, vegetables and fish to a more Americanized diet. The people of the Pacific Islands have an obesity rate of about 50% overall and in American Samoa specifically 47% of the population has diabetes<sup>88</sup>. Though McDonald's cannot be blamed for this shift from a traditional diet to an imported and processed one, their impact is shown through the perpetuation of this unsustainable diet for the Pacific Islanders. This is where the cultural impacts become complex in which it is important to answer our third question asking if the consumers demand this food or not. While there is little to no resistance to the *McDonaldization* of their countries, it has created negative impacts on entire nations in abandoning a traditional, nutri-

tional and self-sufficient diet. A seemingly obvious observation, it is difficult however, to quantify and prove that this is the cause for the lost of traditional food cultivation and procurement practices. In order to measure “Cultural Acceptability”, we want to be sure that this criteria takes this into consideration and attempts to look at not only the direct effects it can have on the culture and people but the long lasting impacts that it will have on future generations. With the fact that McDonald’s impacts on an existing culture will be everlasting, somewhat irreversible and represents an Americanized culture just by its presence, should be considered when verifying our indicator of “Cultural Acceptability”.

The complexity of this issue however, deepens. How can we say that it is wrong for these Polynesian nations to have access to McDonald’s if it is what they demand? In this way we must be careful in our analysis, and how we weigh these values. Do we analyze the impact of McDonald’s presence based on the “introduced values” of the culture, or on their “traditional values”, which support a healthier diet but that is no longer relevant to the current generation raised on fast food?

Keeping all of these factors in mind, it has lead us to give McDonald’s a 1, in regards to the first question, of its negative impacts that generally go undetected, masked behind other social issues and un-addressed. They scored a 2 in terms of recognizing local beliefs and customs because for two main reasons. Although they do consider customs and religious preferences in specific areas, for example with the Halal menu for Muslims; in other ways however, as we saw above in the example of the Pacific Islanders, they are the culprits in perpetuating the abandonment of traditional customs and practices for future generations. In weighing these two completely different examples we bring the final criteria into play on the consumer demand.

In this area they score the highest with a 3. We believe that as a successful business they would not enter into a new market if they did not have a strategic business plan done already in addressing consumer demand in the area. Though we have examples, as we saw in France or Afghanistan of resistance to McDonald’s and what it represents in their countries, for the most part McDonald’s is welcomed and wanted by its consumers, otherwise it would not make business sense for it to enter. Again however, we must ask the question as to whether McDonald’s is simply meeting the demand or creating, but for these purposes we are assuming, that it is merely meeting a demand created by the marketing of the American culture and McDonald’s marketing.

In conclusion for the culturally acceptable criteria the overall score determined by taking the points from the three verifiers, for McDonald’s was a 2. While they are culturally accepted through consumer demand, their culture that is then implanted and perpetuated through its mere presence and values have an impact on the existing culture that can be positive or negative which create new issues among society (ie. Diabetes, obesity, Americanization). The overall problem with this is that it is not currently measured and taken into account when looking at how to create an acceptable diet.

### **Culturally Integrated and Adaptable**

For our second indicator in determining a culturally relevant diet, we decided to conjoin culturally integrated and adaptable. Through this indicator we aim to determine the cultural relevance through analyzing whether the diet is flexible enough to adapt to the local culture and integrate itself through aligning with the local values.

Our verifiers to identify culturally integrated and adaptable are in measuring the participation of the business in the local community demonstrating that it not only is a part of the community but creates

opportunities to engage at different levels. For McDonald's we decided to give them 2 point in this area because though they work on some community projects, in general it is not related to their core business practices. They got an extra 1 point because of their franchising model which demonstrates their ability to give ownership to local and independent people within the community. Though this would insinuate that McDonald's is thus integrated into the community if owned locally, it would go against its core values of consistency to enable the flexibility of the independently owned business to truly integrate its business as a small-medium enterprise. The control that the larger corporation has over the small franchises often debilitates the independent owners local identity and can also can drive other local restaurants out of business who do not have the capacity to compete. For this reason we have given McDonald's less points in terms of its inability to integrate among small local businesses and taking into account the negative impacts and can have on the local economy not only in terms of other restaurants, but of local grocery markets and farmers. As a large corporation with a reputation for consistency and standardization, they lack the flexibility to incorporate local ingredients and thus rely heavily on importing much of their products. Taking again the case of the Pacific Island nations, where much of their food now must be imported, this drives the incentives down for people to pay higher prices for locally produced goods against cheap fast and generally subsidized imported products.

On a positive note, McDonald's did gain more points in the area of aligning with the cultural taste palates of the local society. All over the world, McDonald's has created specialty items to align with what the local people eat. This has gained them 2 points for incorporating these into their meal, however in the example once again in the Pacific Islands, we can see in Hawai'i, where the most popular breakfast item is spam, rice and eggs, this bares to question how helpful they are in really aligning to the local culture. Spam, rice and eggs: introduced food that has been adopted in Hawai'i, thus perpetuates many of the health problems and culturally debilitating practices brought on by not only McDonald's but many multinational corporations representing the American culture. Though accepted by the local tastes, it is important to take into account exactly how the localized menus have an impact on the culture. These water-downed versions of a McArabia or the Ebi O Filet in Japan represent an imitation of the real traditional food and can cause issues again in traditional eating habits; specifically in regards to procurement and production. While we applaud McDonald's efforts in assimilating to local culture, we believe they could take it a step further in increasing their quality of the localized menu in ensuring that not only are their products locally integrated but that they support the local community in creating opportunities to use local ingredients or employ local suppliers to ensure the support of a truly integrated and adapted food system.

In conclusion, we rated McDonald's as a 2 in terms of *Culturally Relevant* though acknowledging its efforts to create independent ownerships through its franchise models and localized menu items, we believe they could take it a step further in increasing the flexibility within their business model to enhance their local culture rather than debilitate.

*Overall McDonald's scores an average of: 2 against the MD-SDI Culturally Relevant Criteria.*

CRITERIA 2: CULTURALLY RELEVANT		
INDICATORS	CULTURALLY ACCEPTABLE	CULTURALLY INTEGRATED & ADAPTABLE
VERIFIERS	Will it have a negative or positive impact on current culture	Community Awareness
	Are local customs, traditions and beliefs, respected and recognized?	Food Procurement & Production taken into account

CRITERIA 2: CULTURALLY RELEVANT		
INDICATORS	CULTURALLY ACCEPTABLE	CULTURALLY INTEGRATED & ADAPTABLE
	Is there a consumer demand present?	
SCORES	2	2
<b>AVERAGE SCORE</b>	<b>2</b>	

#### 4.1c Evaluation against Index Criteria 3: Access and Availability (CW)

We have established two markers (availability and accessibility) to indicate access and availability of McDonald's and their products as these are key elements in securing a sustainable diet and, ultimately, a sustainable food system and global food security. To reflect these indicators, we have established five verifiers (price of meal, price of food relative to average income, proximity, and number of outlets) that indicate overall performance for Criteria 3.

##### Availability

We have determined that **availability** can be analyzed through the **number of outlets** that are present in a given location. As of 2012, McDonald's had 33,000 McDonald's in 118 countries. 14,000 of those restaurants were in the United States alone<sup>89</sup>. With one new location being opened every day in China over a four year period<sup>90</sup>, McDonalds' availability is increasing rapidly. These statistics maintain McDonald's as a **strong performer** in the arena of Availability, awarded with a **4**. (It should be noted that a key factor of food security is availability of nutritious food, as McDonald's continues to struggle with this crucial element, they were awarded a 4).

##### Accessibility

Financial and physical access to food sources (nutritional\* food sources are key here, which will be addressed in Criteria 4) intersect with availability with regard to food security. As resources become available, it's crucial that they are accessible to populations both physically and economically. To analyze McDonalds' performance on **accessibility**, we determined three verifiers: **average price of meal**, **price of food relative to average income**, and **proximity**.

The **average price of a meal** at McDonald's is between 4.75 and 8.95 USD. By comparing and contrasting the wealthiest and most impoverished regions in the United States, we can analyze these model incomes and potential incomes that exist between the two and their approximated financial accessibility to McDonald's meals. Washington D.C. is the wealthiest territory (though not a state, but the country's capital) with a per capita of 148,291 USD<sup>91</sup>. In contrast, Mississippi is recorded as the poorest state, with a per capita of 15,853 USD<sup>92</sup>. The poorest region within Washington D.C. has a per capita of 30,000 USD, still greater than Mississippi's overall per capita. The poorest region in Mississippi has a per capita of 11,585 USD<sup>93</sup>. Now, to put these in relationship to the average price of a meal, we will

look at how feasible it would be for the poorest communities in each of these states to financially access a McDonald's meals.

To evaluate financial access based on **price per meal relative to average income**, we have established 5 times per week as a standard for basic access for individuals and families. As McDonald's is many times the primary food resource available in low income communities, we have determined that access to one meal per 'work week' day meets basic access within this scope specifically. Within Mississippi's poorest region, which has a per capita of 11,585 USD, the average income per day breaks down to 31.74 USD. As the average meal at McDonald's in the United States ranges from 4.75 USD to 8.95 USD<sup>94</sup>, which would allow an individual to purchase at least one meal per day and, at most, six (31.74 USD/4.75 USD) meals per day. In Washington D.C.'s lowest income region with a per capita of 30,000 USD, the average income per day equals to 82.19 USD, which translates to the ability to purchase at least one meal per day and, at most, 17.3 (82.19 USD/4.75 USD) meals per day.

**Proximity** remains an indicative and necessary component of accessibility relative to food security. As there is currently only one location in the lower 48 of the United States that is 145 miles away from a McDonald's<sup>95</sup>, it's evident that availability is a strong point for the enterprise. This indicates that there is a McDonald's within less than 2 hours (approx.) driving distance from any location within the lower 48 (this statistic excludes Hawaii and Alaska). Concepts such as ACCESS' McMobile<sup>96</sup> has created an opportunity for the McDonald's experience to be portable, making food installations accessible on the go. Considering such **strong performance** in price of a meal, price of meal relative to average income, and proximity, McDonald's receives a **4** for accessibility (Again, please note that accessibility within the context of food security depends on the access to nutritious food and as McDonald's currently does not provide sufficient amounts of nutritious food, they receive a **4** in this section.)

*Overall McDonald's scores an average of: 4 against the MD-SDI Access & Availability Criteria.*

CRITERIA 3: ACCESS & AVAILABILITY		
INDICATORS	AVAILABILITY	ECONOMIC ACCESSIBILITY
VERIFIERS	Easily accessible transportation	Price of a meal
	Number of outlets	Price of food relative to average income
	Proximity	
SCORES		
AVERAGE SCORE	4	

## 4.2d Evaluation against Index Criteria 4 : Healthy (DS/CW)

### Nutritionally adequate

With regards to nutritional adequacy, the following points dominated our evaluation of the McDonald's diet. The majority of the products that comprise the McDonald's diet represent poor nutritional value because of the harmful effects of high fat and sugar content. Together, this type of nutritional content represent an unbalanced amount of calories for a meal. For example, if a family of three has lunch at McDonald's and orders the following, a classic cheeseburger, 2 large fries, large Coke, Chicken McNuggets, a double-thick shake, a Cobb Salad and a dessert ice-cream, this is equal to 4,510 calories -

“more than half as many as they should have probably consumed in the entire day”.<sup>97</sup> Moreover, because the majority of McDonald’s products are highly processed, its food is made with many nutritionally harmful ingredients, such as high-fructose corn syrup, which is harmful because of its extremely high fructose, calorie content, or in other words its high sweetness value which makes it so physiologically appealing. Another example of the highly processed content, is that it takes 38 ingredients to make a McNugget from “modified cornstarch” to “citric acid” (preservative) to “partially hydrogenated corn oil”. Processing food is also associated with a loss of vitamin and mineral content from the original food source<sup>98</sup>. For reasons such as the above, we have awarded the nutritional adequacy of the McDonald’s diet with a 1.

## Safe

While food safety issues may overlap with nutritional issues, such as the safeness of highly processed industrialized food ingredients, we have created this additional category of evaluation to consider other issues such as genetically modified food, the presence of industrial chemicals and food hygiene or food-related diseases.

While the human health implications of genetically modified food are still being understood, many studies have already reported negative health impacts, especially in children<sup>99</sup>. The scope of possible side-effects from GMO food in the industrialized food system is extensive. For example, the effects on meat produced from animals fed GMO corn or soy. As mentioned, while the official ruling on the safety of GMO food is still awaiting consensus from the scientific community and food regulators in the European Union, the point is how much risk are we willing to take in the food we eat? The food from the McDonald’s system includes GMOs in most of the production stages, from GMO corn fed beef, to french fries made from GMO potatoes that are fried in GMO vegetable oils, and soft drink made with GMO modified corn sugars<sup>100</sup>.

The use of agricultural chemicals and pharmaceuticals is also an issue we considered for evaluation of food safety. For example, potatoes are conventionally grown with a heavy application of toxic pesticides. According to the organization, Beyond Pesticides “Potatoes use more pounds of pesticides per acre than most crops”<sup>101</sup>. While the residual level of pesticide in potatoes, such as those used by McDonald’s for its french fries, is deemed legally safe, there are nevertheless outstanding concerns over the long-term side-effects on human health, especially in the context of the prevalence of cancer rates.

Similarly, the high use of antibiotics and growth hormones is a necessary feature of industrialized meat production systems, which raises more doubts about the safety of meat for human consumption represented by the McDonald’s burger. According to the Centers for Disease Control and Prevention (CDC), in the United States alone, there are 76 million cases of food borne illnesses and 5,000 deaths a year from viral and bacterial pathogens related to the livestock industry, such as E-coli and Salmonella<sup>102</sup>.

Just like GMOs and pesticides, the use of antibiotics in livestock production is legal. However, according to “hundreds of scientific research studies and analyses by international scientific bodies support the conclusion that the overuse of critical human drugs in food animal production is linked to human diseases increasingly impervious to antibiotic treatment, putting human lives at unnecessary risk”<sup>103</sup>.

Given its standardization of processes and policies for restaurant operations and supplier audits, one positive feature of the McDonald’s system is its high level of food hygiene control. In this sense, it is



likely that any food borne related illnesses are avoided or detected before they get to the final consumer. Nevertheless, given the discussion above, the McDonald's diet represents significant risk to society because of the food system it sources its products from and therefore reinforces. We have therefore awarded McDonald's with a 1.

### Promotes healthy lifestyle

As McDonalds' primary business activities directly impact the health of individuals and communities, **promoting healthy lifestyles** should be a crucial element of their shareholder engagement. There are various elements of healthy lifestyles that range from eating habits to exercise. We have established four markers that indicate performance with regard to promoting healthy lifestyles: **positive influence of eating habits, positive impact on health issues, nutritional information provided, and community initiatives for healthy lifestyles.**

"What is it about fast food? Not only is it served in a flash, but more often than not it's eaten that way too: We finished our meal in under ten minutes<sup>104</sup>." This quote speaks to McDonald's key role in **influencing global eating habits**. One of McDonald's fundamental principles perpetuates a vicious eating cycle: providing food quickly for customers on-the-go encourages quick consumption. As noted in the New York Times, eating quickly has been documented to result in overeating and , ultimately, obesity<sup>105</sup>. McDonald's global influence dictates eating habits on a large scale and maintains the potential to alter diets and eating habits on a fundamental level.

As China's food system is currently being overhauled by McDonald's, it is evident that McDonald's is a powerful player in various elements of the global food system. Catering their menu to a new market, McDonald's has attempted to recruit Chinese consumers through rice based wraps and other rice based items<sup>106</sup>. McDonald's global domination also translates to cultural infiltration and the adaptation of American customs. In addition to influencing Chinese clientele in their behavior and conduct with regard to dining<sup>107</sup>, it's inevitable that eating habits will soon reflect those who have previously been indoctrinated. As a majority of McDonalds' products provide inadequate nutrition as discussed above, their impact on health issues is significant.

In the United States, "Obesity today is officially an epidemic; it is arguably the most pressing public health problem we face, costing the health care system an estimated \$90 billion a year. Three of every five Americans are overweight; one of every five is obese"<sup>108</sup>. In relationship to this health epidemic, McDonald's has been criticized for its excessive meal sizes, highly processed foods, and their marketing style that primarily targets children, which have been noted as **impacting consumer health** significantly. With popular items such as their Triple Thick Chocolate Shake containing a whopping 1,160 calories<sup>109</sup>, McDonald's has an undeniable impact on the health of their consumers. Unfortunately, it is evident that McDonald's and its shareholders are reluctant to assume and address responsibility for this truth. A shareholder proposal supported by Corporate Accountability International and 2,500 health practitioners that suggested McDonald's conduct a health impact assessment , was rejected by McDonald's investors in 2012 and again in 2013<sup>110</sup>. By rejecting a proposal that would have evaluated McDonald's "health footprint", assessing the relationship between food related illnesses and McDonald's profit, it's evident that McDonald's fails to value it's negative impact on consumer health. As McDonalds' core business is directly related to health, it has established **community initiatives** like "Get Moving with Ronald McDonald"<sup>111</sup> to encourage its stakeholders to be active. As provided in the above analysis, McDonald's fails to be proactive and truly promote healthy lifestyles and for this reason, we have provided them with a 1 for criteria 4.

Overall McDonald's scores an average of: 4 against the MD-SDI Access & Availability Criteria.

CRITERIA 4: HEALTHY			
INDICATORS	PROMOTES HEALTHY LIFESTYLE	NUTRITIONALLY ADE-QUATE	SAFE
VERIFIERS	Positive influence on eating habits	Amount of calories	Amount of chemicals used (Pesticides, hormones)
	Positive impact on health issues	Amount of vitamins, minerals and proteins	Amount of GMOs
	Nutritional information provided	Rate of malnutrition (obesity and hunger)	Rate of documented food contamination outbreaks
	Community initiatives for healthy lifestyle	Rate of diet related health problems	
SCORES	1	1	1
AVERAGE SCORE	1		

## 4.2e Final Performance of the McDonald's on the MD-SDI

After we have evaluated its performance on the individual criteria, McDonalds final performance on the Index is **1.94**. This represents that the type of diet produced by the McDonald's system represents diets that are low in terms of sustainability. While this may come as no surprise to some, the report will now focus its attention on how the sustainability of McDonald's diet could be improved given the positive aspects of the McDonald's system that we have previously discussed in earlier sections.

CRITERIA	SCORES
1. PRBE	0.75
2. Culturally Relevant	2
3. Access & Availability	4
4. Healthy	1
TOTAL PERFORMANCE	1.94

## 4.2 Why Compatible? (Strengths for Sustainable Food Future)

### 4.2a Reason 1 - The Ability to Adapt for Access and Availability (CW)

As McDonald's is present in more than 100 countries and is continuing global domination by expanding on a grand and rapid scale in countries such as China with over 2,000 restaurants expected by 2014, availability is an undeniable strong point for the enterprise. Operation efficiency has secured McDonald's as the leader of the fast food industry. 'McDonaldization' of the fast food industry has standard-

ized daily restaurant operations, ensuring that customers get the same quality consistently regardless of location, allowing McDonald's to expand exponentially, available universally. Having maintained a strong presence throughout the global financial crisis has proven McDonald's to be company able to uphold adequate consumer demand. Not only were they able to simply meet traditional customer demand during the financial downturn, but they were able to expand and access new consumer markets. This coupled with their high accessibility proves McDonald's to be compatible



with the transition towards a sustainable food future.

While various competitors found it difficult to stay afloat during the 2008 recession, McDonald's was able to thrive. Unable to keep up with the evolving customer profile, fast food giants like Burger King floundered during the financial crisis while McDonald's acquired new clientele while retaining their traditional consumers by maintaining low prices and expanding their menu options. As both financial access to products and physical access to restaurants encouraged consumers to maintain loyal and frequent the enterprise, it's evident that McDonald's has the ability to adapt to change, retain consumers, and simultaneously gain new clients. These elements prove McDonald's to be a model for the future of sustainable diets.

### 4.2b Reason 2 - The Ability to Influence Systemic Change (DS)

The development of a sustainable future system for a population of 9 billion by 2050 will undoubtedly require an effective cross-sector approach. Each sector has their own important role to play. Governments and the public sector will play a vital role for issues such as regulations, trade and subsidies.

NGOs, not-for-profits and civil society groups will also play an important role in terms of defining the direction of development. However, given that production and distribution, and therefore control of food, is in most parts of the world today, now the responsibility of the private sector, industry actions therefore have the ability to make or break the development of a sustainable food system.

This strong influence of the private sector, highlights the need for the food industries to adjust to the changing conditions and demands of the 21st century, and, follow best practices that promotes progress towards the sustainability criteria of our Multi-Dimensional Sustainable Diets Index.

The question then stands, who can successfully influence industry in such a manner? As mentioned, other sectors will play a critical role, but additionally one of the most powerful sources of influence to change the practices of the private sector, will be the corporations that comprise the private sector. Generally, one defining factor for influence within the private sector is size. Not only is size a defining factor but also it is market position, again, generally, with markets playing follow the leader. McDonald's as the world's biggest and leading fast food retailer currently has both these qualities. As noted in our project objectives, qualities that we see with huge potential to move the industry to be a force for good.

As we have demonstrated in earlier sections of the report, McDonald's has a range of influence and impacts on how society and industry operates. McDonald's can influence its customer's consumption habits. It also can have considerable influence in determining how, what, when and why its suppliers produce. For example, McDonald's Restaurants UK has released a new carbon efficiency tool in a bid to improve farm performance for all its beef suppliers. In a first for the industry, the 'What if?' tool created by McDonald's support, "gives farmers the ability to measure carbon emissions against beef output per kilo and benchmark their score against the top ten per cent of farms in their sector"<sup>12</sup>.

As this example demonstrates, not only does McDonald's influence its own consumers and suppliers behavior, but initiatives such as these, go on to influence the behavior of their competitors and competitor's suppliers, which ultimately creates systematic change in the industry. Systematic industrial change which is exactly what the current food system requires if it is to align itself to overcome future challenges. It is within this strategy to bring about change, that we see the strength of McDonald's to contribute to a sustainable food future.

#### 4.2c Reason 3 - The Ability to Sell Sustainability (IM)

As we outlined in our SWOT analysis, McDonald's has many strengths that attribute to its success. What we would like to demonstrate is, how McDonald's can use these strengths as a force for good and to advance a sustainable food system for the future. We believe McDonald's can utilize its marketing and communications strengths in order to communicate the importance of a sustainable diet to its stakeholders.

Before looking at how we can capitalize on the strengths of McDonald's communication and marketing strategies, it is important to identify the weaknesses that a sustainable diet has in communicating its message. A sustainable diet as we have described, is a win-win-win situation benefiting people, planet and profit. Why, then, has it failed to reach the masses and achieve the scope that McDonald's has, in the last century? Similar to many other sustainability issues facing the world today, the message communicated is complex and depending on who interprets it, the message can be translated in various ways.

When analyzing what it is that creates change among people, it are the small things that count and a message must be direct and inspire a specific action. If the message is too general, spread out or lacks clarity, people do not know how to process the information and it creates inaction. How then does this apply to much of the sustainability movement? Among many activist groups, NGOs and the private sector, there is a lack of unity, which can dilute a message and among individuals of civil society cause inertia. Take for example the issue of GMOs. With campaigns that range from the opposition to the monopoly of large seed companies such as Monsanto, to the chemicals in our food to the spraying of pesticides... the varied arguments though all legitimate concerns can sometimes have a dampening effect on the cause because of the lack of clarity within the message. This small example is precisely the reason why we believe it is important to capitalize on the success of the private sector in selling a complex message to stakeholders of all genres.

Now that we have briefly explained the weaknesses concerning sustainability in general, we will analyze the specific strengths that McDonald's obtains that will help to mainstream a sustainable diet through marketing and communication. McDonald's has many strengths within its marketing strategy, however it would be most effective in communicating the importance of a sustainable diet because of its innovative marketing techniques, its scope and ability to market to all audiences and finally through its capacity and budget.

The power behind McDonald's lies in its ability to create catchy slogans, captivating commercials and products that sell themselves through incentives rather than the actual product, such as Happy Meals. How can we capitalize on these simple successes with a sustainable diet.

McDonald's utilizes creative marketing messages, celebrities that will champion their message, and they have the reach to all regions of this world and across generations. Incorporating their ability to adapt different messages directed towards specific audiences, taking into consideration the cultural differences and sentiments will allow for the concept of a sustainable diet to maintain its local preferences and understood by its consumers. In order to make this truly successful the idea of a sustainable diet needs to reach regions all around the world and all generations. In this way McDonald's is unique in that it has franchises all over the world, its menus and advertisements translated in many different languages and is a well-known brand. The reach and scope that McDonald's has that can affect the eating habits of millions all around the world should be taken advantage of and if done correctly could be marketing sustainable eating habits of this proposed diet to create an informed consumer.

Finally, McDonald's not only has the creative marketing techniques and reach to a large number of consumers, but it has the capital to do so. Where most NGOs fail in trying to promote sustainability is funding, sometimes seen as the "elephant in the room", money is a huge factor in creating successful marketing campaigns that influence societal norms. The non profit sector, often with good intentions, tend to focus much of their limited capital directly towards operational costs of their programs, but this is where the private sector and McDonald's differ. McDonald's main concern is to create capital and in order to make it successful it ensures a strong brand and message.

In this way we believe McDonald's will be compatible in mainstreaming a sustainable diet. They have the tools and means to do so, and not only will it benefit the fast food industry, and current stakeholders but will benefit McDonald's economically by staying ahead of the curve and creating a strong message of the importance of a sustainable diet. We will explore exactly how McDonald's can succeed as a business from adopting a sustainable diet in our next section.

## 4.4 Making the Business Case for McDonald's (DS)

Identifying McDonald's strengths, for how it can potentially contribute to the mainstreaming of sustainable global diets is one thing, understanding why McDonald's should take that the next step and utilize these strengths is another. That is, after reading the above, some may react by saying, but McDonald's is McDonald's, its not the UNFAO, its not Greenpeace, and its not McDonald's responsibility to provide a sustainable food system. In this sense, our above analysis of what McDonald's could do, may seem like just wishful thinking. Why should we expect McDonald's to actually care about the environmental, socio-economic and cultural sustainability challenges raised in this report?

Depending on how much you believe their CSR programs and "Road to Sustainability" marketing communications, McDonald's, unlike the purpose of UNFAO or Greenpeace, is ultimately driven by economic profit. To this effect, we can defend why the above reasons, regarding how McDonald's could be a force for good, is not simply just wishful thinking, but they actually make good business sense too. We would therefore like to outline the business justifications for why McDonald's should act to mainstream sustainable diets.

### **Maintaining competitive advantage**

The first reason we propose that McDonald's should aim to mainstream more sustainable diets is because of future market competition. While McDonald's may currently be regarded as the sustainability leader within the sector, this may not be the case in the years to come, especially as new competitors with a focus on sustainability enter the market.

For example, the Mexican-food chain Chipotle, has tripled its revenues since 2006 and now has more than 1,450 stores across the U.S., Canada, the United Kingdom, and France. The successful growth of Chipotle is attributed to its sourcing of local and organic ingredients and high standards of animal welfare from suppliers. Additionally, as of March 2013, Chipotle has made history by becoming the first American fast-food chain to label the presence of GMOs in its products<sup>113</sup>. According to Chipotle, this move has not impacted sales, and the labeling actually helps to build trust with consumers because they are being more open about the food they serve. Chipotle are also aiming to remove GMO ingredients from their menus in the near future<sup>114</sup>.

Similarly, in 2006 Swedish fast-food burger restaurant, Max Burgers, reassessed its entire enterprise, searching for ways to reduce its environmental footprint. Amongst other green initiatives, such as only buying wind power and carbon offset programs, Max started putting CO2 labels on its menu items. By informing its customers exactly how much Co2 each of its products emitted, it has been able to influence its customers to choose more sustainable options<sup>115</sup>. As a result of such initiatives, from 2005 to 2011, Max Burges has opened 45 new restaurants and more than doubled its market share in Sweden and become Sweden's most popular burger chain, defeating McDonald's, even though it has three times as many restaurants in Sweden<sup>116</sup>. Max is now seeking to expand across Europe.

What the above examples shows for McDonald's is that sustainability issues are becoming an important issue in which to maintain bonds with consumers and stay relevant in the market. A competitive point

which is likely to become increasingly important, as “eco-minded Millennials” move into the workforce and will typically prefer restaurant who are perform well on social and environmental sustainability issues<sup>117</sup>.

### **Minimizing future risks**

In addition to avoiding loss of market share, the next reason why McDonald’s should care about mainstreaming sustainable diets is because it represents sound risk management. With key issues relevant to the fast-food industry, from climate change to obesity, not going away anytime soon, and on the contrary, likely to worsen, it is increasingly likely that governments will be forced to impose regulations and taxations on the private sector to mitigate the impacts on public systems. What would McDonald’s do if it had to pay tax on how much Co2 or fat was in its products? How much would the Big Mac really cost then? The concept of a ‘Fat Tax’ may be closer to reality that McDonald’s may think, with Sweden and Denmark recently experimenting with legislation that charges for foods with high saturated fats<sup>118</sup>. If McDonald’s starts aiming for more sustainable products now, and such legislation or taxations did happen to gain momentum in the near future, McDonald’s will undoubtedly be better positioned to manage the changes and avoid the negative impacts on business.

### **Better governance, better business**

As discussed in the environmental impact analysis of this report, McDonald’s already understands from its efforts to reduce waste, that corporate governance with a focus on sustainability can not only be good for the environment, but also represents considerable financial savings. That is, a focus on sustainability can drive better governance across the entire business and not just in the corporate social responsibility related domains. This in turn can result in greater operational efficiencies and value adding management practices.

Finally, it should be noted that the above business justifications for why McDonald’s should mainstream sustainable is by no means exhaustive. There are other compelling reasons, such as the enhanced ability to attract, retain and motivate employees and also the enhanced ability to create new business opportunities. However, what all these justifications have in common, is the importance of effective stakeholder management. As we have seen, for McDonald’s stakeholders, from consumers to NGOs to governments, the issue of achieving a sustainable food future is indeed a critical one, which McDonald’s must contribute as a major player from the private sector.

## **Section 5 - Recommendations**

### **5.1 Recommendation 1 - Find the Electric Car of Fast-Food (DS)**

#### **5.1a Why**

When is a BigMac like a BMW? This may sound like the start of a joke, but for McDonald’s, the answer to this question may have serious implications. What both conventional hamburgers and conventional petrol fueled cars have in common is a very high environmental impact, especially with regards to greenhouse gas emissions. However, the automotive industry has been focused on reducing the environ-



mental impact of its products for years, unlike McDonald's and the fast-food industry, which as our previous analysis has demonstrated, seems to only just waking up to the challenge.

Given the increasing threats of climate change, just like the common car and many other everyday products and services, the common hamburger, symbolized by the Big Mac, will increasingly come under scrutiny for its contribution to humanity's greatest challenge of the 21st century. However, unlike the automotive industry, the fast-food industry does not have a solution to overcome the emerging consumer concern about its products environmental impacts. That is, electric cars and hybrids are now commercially available, products that represent almost zero or significantly less emissions than conventional automobiles. While admittedly electric and hybrid model's penetration of the market has been relatively slow, the important point is that the industry has a technically feasible solution that is able to revolutionize its product's environmental impact when society reaches the climate crisis tipping point.

Moreover, given a supporting clean energy grid, this revolutionary innovation, reduces a car's level of emissions to the exact type of level we are going to need, if we are going to avoid a severe climate crisis in the future. The number of cars in the world is now 1 billion, this number is predicted to reach 2.5 billion by 2050<sup>119</sup>. The electric car can therefore be seen as a possible solution that enables humanity to continue to enjoy the convenience of driving while adapting to population growth and resource constraints. In this sense, the electric car is likely to be aligned to the sustainability requirements of society in 2050.

But what about hamburgers? We know that McDonald's alone currently sells approximately 2.6 billion a year, so by 2050, who knows how many billions more it could possibly be selling? And will there still be a stable climate and enough land and water resources to accommodate billions of more Big Macs? While we have discussed earlier about how McDonald's is already positively influencing reductions in emissions from its meat suppliers, the question inevitably stands, how far can we innovate the intrinsic biological processes and resource input requirements of a cow to produce beef to make into Big Macs? Some claim that beef productions can only be environmentally sustainable when managed on a small-scale basis<sup>120</sup>. Small-scale meat production is definitely not a term that will fit well with the future of McDonald's and the fast-food industry.

So what can McDonald's do? As we have demonstrated through our inclusion of cultural relevance in our Sustainable Diets Index, to many, culture is an important part of defining the food we eat. With this in mind, unfortunately McDonald's can't expect that everyone will become vegetarians - that would have been like the automotive industry asking everyone to start riding bicycles.

However, just like in the example of the automotive industry, we believe there are solutions for the fast-food industry to solve this dilemma and align its business activities to promote environmental sustainability. We therefore strongly recommend that McDonald's engage in the following directions of innovation.

## 5.1b How

### Innovation to keep an eye on

The first and most radical innovation we recommend is definitely one to be implemented in the long term. While this innovation may seem radical, it has the most potential to be the electric car for the

fast-food industry. If 9 billion consumers want to continue to eat meat hamburgers, real meat burgers they could possibly have, without destroying the planet.

As mentioned in our earlier PESTEL analysis, food technology has tremendous potential for innovation. Most notably for McDonald's, the production of real animal meat, just without the animal. Known technically as cultured meat, that is, meat produced in-vitro using tissue engineering techniques, this new meat production method is currently being developed. As of May 2013, researchers in the Netherlands have been able to create a five-ounce hamburger made from cultured beef muscle tissue. While the cost and time required for the production process of this hamburger is a long way from being ready for the McDonald's system, the key strategic point is that, this idea of growing meat protein, without the animal welfare issues and without the environmental damage of conventional livestock production, has now moved from being a science-fiction concept to a proven technology that it is able to be done.

Moreover, it is able to be done with great benefits to society, potentially resolving many of the environmental problems identified in Section 1 that can be associated with our global diets. Using a life cycle assessment research method for assessing environmental impacts of large-scale cultured meat production, a 2011 study in the journal of *Environmental Science and Technology*, concluded that the environmental impacts of cultured meat production are “substantially lower” than conventional meat production.

For example, in comparison to conventionally produced European meat, cultured meat involves approximately 7-45% lower energy use, 78-96% lower GHG emissions, 99% lower land use, and 82-96% lower water use depending on the product compared<sup>121</sup>. Just like with the case of the electric car, this innovative technology reduces a hamburger's level of emissions to the exact type of level we are going to need, if we are going to continue eating more and more meat, and be able to avoid a severe climate crisis in the future. Most likely, the arguments in favor of such environmentally efficient production will only gain strength, as worsening impacts from climate change are felt.



While it may be some years yet before this production method becomes commercially available, we recommend McDonald's to keep a close eye on the development of this technology and when feasible, start sourcing cultured meat for its hamburgers, therefore drastically reducing the environmental impact of its products.

Finally with regards to this recommendation, we would like to conclude by addressing the issue of consumer reaction to cultured meat. We believe that like many new technologies, while there maybe some negative attitudes to the concept at first, that this innovation will most likely be accepted because if the majority of consumers really cared where and how their meat was produced, why would they be continually buying, eating and supporting the current industrialized meat system?

### **Innovation for the here and now**

While the above innovation is one for the long term, there are nevertheless, a range of innovative options that McDonald's could implement in the short-term to make its menu both more environmentally friendly and healthier. For example, McDonald's could considerably reduce the environmental impact of its products by reducing the quantity of meat in its burgers. For example, a Big Mac with only one meat patty and one vegetarian burger instead. This combined meat-vegetarian solution is somewhat like the hybrid car for the automotive industry. Providing the consumer with a transitional product. While this may seem like a simple recommendation in the context of hamburgers, as we have seen, beef patties add up to some serious impacts, so being able to systematically reduce the huge amount that goes in and out of McDonald's, potentially by the millions of kilos, could provide big environmental savings from such a small change. Alternatively, by innovating its products with existing meat alternatives made from soy and wheat proteins, McDonald's could of course offer vegetarian options too (for those who enjoyed riding a bicycle instead of driving a hybrid car).

While the above product innovation range from the radical to the simple, across both the short and long term, they nevertheless have the same end goal in common. That is, the end goal of this recommendation would be to align the environmental footprint of McDonald's products with its expected growth in sales given the natural resource constraints to business in the 21st century.

While offering more sustainable products is one important change McDonald's should make, getting consumers to buy them is another challenge which will be addressed in the following section.

### **Benefits for All (and for the planet)**

While we said earlier that McDonald's cannot expect everyone to be willing to accept vegetarian menus for the greater good of the planet, this does not mean that with the right incentives, people can't reduce their consumption of meat products. It is within this idea that our second recommendation for McDonald's emerges.

If McDonald's really wants to be on the "Road to Sustainability", not only do they have to offer more sustainable products, but critically, they also have to contribute to influencing consumers towards these more sustainable options. So how exactly do you incentivize consumers to trade in their BigMac for a McVeggie?

We propose that this could be achieved by enticing consumers with the very thing that attracts most consumers to McDonald's in the first place, that is, low price and convenience. What if consumers were rewarded for making more sustainable choices? What if consumers were rewarded with price discounts and free products from their loyalty of buying sustainable products? What if consumers only had to conveniently swipe a card to receive the aforementioned benefits? What if McDonald's introduced the McBenefits reward system?

This system would go hand in hand with increasing the scope of responsibility for its environmental impacts. That is, instead of just taking responsibility for the CO2 emissions from its restaurants, McDonald's should also take responsibility of the CO2 in its products and communicate this to its customers. By labeling all of their products with their respective impacts, and assigning a points system based on the level of impact, such as a CO2 or water efficiency rating, McDonald's could reward customers who choose the more sustainable options. Customers could accumulate points and redeem the points for discounts off future meals. The points system would have to be designed to be easily accessible and understandable for consumers to make quick decisions, so we suggest categorizing the menu into prod-

ucts that earn points and their regular menu. This reward system could also increase loyalty amongst its customers and attract new ones, enabling McDonald's to sell more of its sustainable products, and overtime, as sustainable food choices becomes more popular, it could make the sustainable product offerings the core of its menu.

While the detailed planning of such a reward system goes beyond the scope of this report, the end goal of this recommendation is clear, to develop a consumer marketing system that effectively contributes to changing society's patterns of consumption. To change the way we think about the impacts of our decisions and to be able to enjoy the benefits of responsible consumerism, from the small ones (i.e. economic savings) to the large ones (i.e. reducing our environmental footprint).

## 5.2 Recommendation 2 - Nutrition at the forefront (CW)

### 5.2a Why

As health epidemics such as obesity and diabetes ravage entire nations like the United States, it's evident that change is necessary and inevitable. A result of various environmental, economical, and social factors, food security has become a global issue that prohibits entire populations from accessing nutritious, affordable food. This lack of access directly correlates with high levels of diet related health issues and creates an environment where sustainable diets are unattainable. As the global community has begun to recognize the necessity to transition towards diets that have less impact on the environment and are procured in a sustainable manner, McDonald's has the opportunity to dictate this inevitable transformation. Through greater transparency achieved through health assessment, increased nutrition based community engagement, and incentive based program implementation, McDonald's has the potential to lead the crusade towards sustainable diets.

### 5.2b How

#### "Health Footprinting"

In 2011, and again in 2013, McDonald's received its first shareholder proposal requesting that the corporation assess the impact that their products have on children. "It calls for McDonald's, in light of 'the contribution of the fast food industry to the global epidemic of childhood obesity and diet-related disease,' to produce a report assessing 'the potential impact of public concerns and evolving public policy on the company's finances and operations.'<sup>122</sup>" The concept of "health footprinting", as it is referred to in this context, incorporates the idea of including health care externalities that are not currently accounted for in McDonalds' current annual report. This proposition was co-established by The Sisters of St. Francis of Philadelphia and Corporate Accountability International, and is supported by various other shareholders including the health care system Catholic Health East. As "greenwashing" and "nutri-washing" are the new black, the proponents of this proposal argue that McDonald's has utilized marketing to disguise their perpetually health threatening products.

"We're in the middle of a public health crisis, a virtual slow motion catastrophe of non-communicable diseases, which is exacting a crippling human toll. Parents and the health community have lost their appetite for McDonald's empty promises and unwillingness to truly address its significant contributions to the crisis "<sup>123</sup>. It is evident that both the medical community and the consumer population are concerned for the future of our food system and the universal impact that McDonald's maintains. For

McDonald's to remain ahead of the curve, it's crucial that they implement this, or some version of this, proposal. Both consumers and shareholders are demanding a change, one that we believe is necessary and inevitable. To maintain their position as the leader of the fast food industry, McDonald's needs to adopt this idea, embrace it, and crusade. By institutionalizing this concept into the fabric of their procedures, this corporation has the ability to significantly influence the transition to a more sustainable diet, food system, and security. In conjunction with the adaptation of this assessment tool, community investment and stakeholder engagement surrounding elements of nutrition and healthy living within franchise communities are essential to contributing to the evolution of the enterprise and our global diets.

### **Nutritional Workshops and Community Events**

A key element in providing consumers the ability to make proper diet choices is by building capacity through education. Empowering individuals, families, and communities by providing them with informative tools to enable a healthy lifestyle and balanced diet. While McDonald's has made some effort to inform their consumers of the nutritional value of their products and has done some engagement with some demographics of their clientele, increasing their activities will better prepare communities on a foundational level to transition to sustainable, balanced diets and living.

Currently, McDonald's offers nutritional workshops for mothers to participate in and obtain information on how to eat properly when frequenting the franchise. While initiatives such as the McDonald's Mom Nutrition Workshop<sup>124</sup> function to provide nutritional information, dietary references, and a greater understanding of how to eat balanced meals, providing more frequent events that are targeted to various demographics is crucial to ensuring structural change. In addition to providing nutritional workshops for mothers, we would recommend educational workshops for all members of the family. By educating all family members, each individual is empowered to make informed decisions for themselves and for their family's as a whole. The McDonald's Mom Nutrition Workshop model incorporates essential elements that are necessary for sustainable diets and proper nutrition. Providing nutritional information in conjunction with having a dietary specialist on hand to educate participants on proper nutrition is an effective component of the program. To reach franchise communities at large, McDonald's can utilize their overwhelming presence to establish community events surrounding proper nutrition and healthy lifestyles. Providing a platform for local producers, consumers, and suppliers to interact through engaging activities that are educational and fun will improve McDonald's community engagement and contribute to a communal transformation that is inherently structural.

### **McBenefits: Benefits for All**

McBenefits, introduced in recommendation 5.1, is a system that not only benefits environmental impacts, but simultaneously addresses issues of poor nutrition. McBenefits is an incentive system that functions to encourage consumers to purchase products that have less environmental impacts and provide more nutritional value than other options. By adopting our recommendations grounded by education in conjunction with the McBenefits system, communities are empowered to demonstrate the information and tools gained through action. Through this positive reinforcement, McDonald's has the potential to influence patterns of consumption to not only more environmentally sustainable options but just as importantly to healthier choices. Through the McBenefits reward scheme customers, whom are otherwise financially marginalized from more expensive and healthy eating options, would be able to use the scheme to make healthy eating more accessible. Moreover, the scheme would provide the

initial motivation to introduce people to the experience of healthy eating, especially if it means that will be able to reinforce dietary changes in the future with further economic benefits and rewards.

By implementing genuinely healthier options in conjunction with the McBenefits scheme, the end goal of this recommendation would be for McDonald's to promote foundational changes in eating habits in an important consumer demographic that is going to be necessary in order to move our global community towards nutritional security and healthy, active lifestyles.

### 5.3 Recommendation 3 - McLocal (IM)

How can we apply sustainable practices to a huge conglomerate like McDonald's? The key will be to start with its independent franchise owners. This final action will need to be a partnership between McDonald's and its owners, local producers and local legislators. We recommend that McDonald's require its franchises to procure a percentage of their ingredients locally when possible. In 2010, in Washington State, McDonald's ran a "local" menu campaign to demonstrate the ways in which it was sourcing local products<sup>125</sup>. There was criticism however over the fact that McDonald's already sourced much of their potatoes from that area and in a sense "handpicked" the area because of the easily accessible products rather than really trying to adapt their menu to the local products. Though a great effort, we believe it should look into expanding its menu to incorporate more local ingredients thus innovating to find new menu items or new ways of making their existing products through the "Meet Old McDonald" Campaign.

The "Meet Old McDonald" Campaign would emphasize the stories of the farmers in which the food was sourced thus encouraging McDonald's to source more products from local farmers and create more accountability as to the supply chain. The campaign would give a personal touch to the marketing aspect in which the experience of entering a McDonald's could change into a learning experience for the consumers as they enter and see the stories of the products they are about to consume. This campaign will start with the independent franchises in order to pilot exactly how it can be successful. They will each be required to source a percentage of their ingredients locally as well as find their local "Old McDonald" to feature within their restaurant. Each story and product will vary across regions and should be developed and identified according to local preferences and availability.

#### 5.3a Why

Creating incentives for independent franchises to incorporate local ingredients, as we mentioned in the culturally relevance section, ensures local acceptability, adaptability, economic enhancement, a lower environmental footprint in transportation, health benefits in lessening the use of more processed food, an increased food independence and a higher reputation locally.

Our recommendation is bold in that it could undermine the *consistency* value of McDonald's if not done correctly. The inconsistency of ingredients and products factor could not only hurt McDonald's operations and reputation but that of the local producers as well. Taking these risks into consideration there needs to be specific guidelines and precautions taken before this recommendation is implemented.

We have outlined in numerous sections the impact that conventional farms have on the environment, which only helps us in making the case for supporting smaller local producers. The local ingredients used will market well among the community in that it is supporting its own economy and ensuring that

producers are receiving fair prices. This shift will not happen quickly or at a large scale but will also influence large producers to adapt to different techniques as well if local providers begin to be favored.

Supporting local farmers and businesses not only decreases the dependence on imported and processed foods it will also increase awareness of the public as to where their food is sourced.

### 5.3b How

There are many areas of precaution in the “how” to implement this recommendation to a large corporation that feeds millions of people each day. Below we will list the risks that we have identified and then describe the possible actions to take in avoiding these risks to implement this recommendation in a coherent way.

#### Possible Risks associated in McDonald’s adopting local ingredients

- Over purchasing of products from local suppliers leaving grocery stores and restaurants without products
- Lack of availability of specific products thus causing inconsistency in taste/menu and inability to meet customer demand
- Lack of consistency of products between restaurants
- Higher prices that translate to the consumer and discourage McDonald’s to purchase local over imported
- Inability for local suppliers to produce at the scale that McDonald’s demands and causes shift to more conventional farming techniques.

Keeping these risks in mind are important as we go through the following recommendations to ensure that these are taken into account and adjustable. First, we believe that it is important to start on a small scale and adapt as you go in order to ensure that this localization program can be replicated but at the same time flexible. Looking at the successes and failures of this will allow them to build the model of possible integrating a more locally relevant diet into the fast food system. In order to make this recommendation successful McDonald’s must secure strong relationships between local producers/suppliers, support policies that will increase local food production and incentives, apply the same standards across all restaurants but leave room for innovation in order to incorporate new options.

#### **Meeting Old McDonald**

The relationship between the independent franchise, as a representative of McDonald’s, and the local suppliers will be important in ensuring that this be successful. Through the products and marketing the local suppliers will be showcased and supported. Together they should identify the availability of products taking into account quantity and seasonality, current selling prices, the impact on current vendors and distributors and creating menu items or incorporating these products into the existing menu. In creating an on going relationship with the local suppliers, McDonald’s will be able to monitor the production levels and ensure that they can meet their supply and demand.

#### **Supporting local**

McDonald’s going local can seem as a paradoxical statement and rightfully so. In order to ensure that McDonald’s does not take away opportunities from local businesses it will be important for them to support regional policies that enhance local businesses and production. The incentive for McDonald’s?



It will increase their business as well if local suppliers have greater capacity and capital to produce food and thus allow McDonald's prices to remain lower. This is not a certain effect of effective policy, however could be an incentive for local farmers to maintain a relationship with McDonald's to create stronger support for incentivizing local products.

### **New Products**

McDonald's continues to strive towards innovating products. As we have seen in our first recommendation we think the sustainable diet will only enhance this ability to create new menu items. Working with local suppliers to use local ingredients will lead to either learning how to incorporate them into the existing menu or open new opportunities to innovating new products that are locally created. A concept McDonald's is not new to in order satisfy local tastes, by incorporating local ingredients it will make shifting to a sustainable diet just that much easier. Ensuring that the menu items are to consumers taste palates will force McDonald's to research traditional ways of consumption while blending with today's society that should create convenience and quality products. With McDonald's leading the way to innovate traditional knowledge for its products it could set the trend for not only the rest of the industry but for consumers eating habits as well.

In conclusion, we believe that in order for McDonald's to be successful in mainstreaming a sustainable diet that will also benefit them as a business and ensure true sustainability will be to make a drastic change in the procurement of their products to shift towards supporting local produce and incorporating it into their menu and core business principles.

How can we be sure however, that the consumers will embrace these new products, ingredients and face of McDonald's? To ensure that its consumers embrace the local products, we will add another dimension to the "McBenefits" Card. The "McLocal" menu items will feature not only the story of the local suppliers but will earn customers points when they choose to purchase an item that contains local ingredients. An example of a similar incentive program in which happens every year in Hawai'i by a local non-profit organization called, Kanu Hawai'i, is a month in which members are challenged to "Eat Local" in different ways for the entire month. Members are given lists of restaurants, grocery stores and suppliers that are participating in which the entire month they can frequent and meet up with fellow members. Kanu Hawai'i partners with independently owned franchises such as, Zippy's, a fast food restaurant that for the entire month only purchases local eggs and salad. The boost in their business from the "Eat Local Challenge" has not only encouraged them to continuously purchase local eggs but has brought a new type of "health-conscious" consumers that would not normally frequent there if it were not for the campaign.

With the McBenefit card it will work in the same way except take it a step further in the incentivizing portion because it aims for a different type of consumer. Also instead of restaurants or grocery stores, it will feature the local menu options in McDonald's, which will vary in each area. Consumers can visit different McDonald's around the world and gain different stamps specific to that region as well as make suggestions of different local ingredients available to encourage more engagement between consumer and business.

With a high consumer demand of products, McDonald's also needs to ensure that there are enough products to meet customer demand, they will need to go beyond just the procurement of the products and work with the local producers in creating a consistent product and menu that compliment each other. This will vary in each independently owned franchise and will require for the owners to develop

relationships with local suppliers, ensure that they are not over sourcing the local supply but enhancing it.

## 5.4 Conclusion - We say, “YES!” to McSustainable (IM)

As we take into account the recommendations for McDonald’s to become more sustainable we realized there was a missing piece to the puzzle. Will our recommendations towards sustainability threaten the core business of McDonald’s? Will McDonald’s still be McDonald’s if our recommendations are taken into account? These are fundamental questions that we would like to end with as we conclude exactly in what way we believe McSustainable can exist. As we began on our journey to analyze if McDonald’s could be a force for good, we had to put our preconceptions aside to develop a proper analysis. Although some of our theorems were proved right, we were pleasantly surprised in the areas in which McDonald’s performed well and had significant potential as we have outlined throughout our project.

The purpose of this report is meant to describe the MD-SDI to McDonald’s but to be used for its stakeholders in hopes that it will be the stakeholders that pressure McDonald’s into changing. At the end of the day McDonald’s is a business driven by its stakeholders, and though we recognize that the issue here is the “chicken or the egg” dilemma, in terms of who is driving who, we think in order to make true transformative change, it must happen from both ends of the spectrum. Change must happen internally from within McDonald’s as well as externally creating greater consumer awareness and societal pressure from the outside. In order to realize this change in our food system however, our final recommendations are small but practical areas in which McDonald’s and NGOs must work together towards sustainability.

To answer the question then, will McDonald’s still be McDonald’s if it decides to mainstream a sustainable diet and become McSustainable, our answer is, “YES”. McDonald’s can be a force for good through strategically integrating a sustainable diet for its consumers. Through adopting the MD-SDI McDonald’s has the potential to continue as a successful business yet be able to change the fast food industry and the world in a big way. Will it be the same McDonald’s? No. This is a McDonald’s of the future, a hybrid version, and a model for all corporations to look towards in the future to be successful.

## 5.5 Recommendations for further developing the MD-SDI (DS)

The Sustainable Diet Index proposed in this project was intended to assist with structuring our evaluation of the McDonald’s diet. Given the time and level of expertise we had, we believe the index served its purpose well and was able to provide us with an approximate representation of the sustainability of the McDonald’s diet. Our methodology for evaluation was conducted by finding evidence to support or reject performance on a given indicator but to this effect, the level of this evaluation was done on a representational level and was not based on comprehensive data or statistical analysis. However, we believe that this report has been a valuable first step at testing the possible metrics of sustainable diets and we hope that such an index will be developed further to advance the many the benefits of a sustainable diets. It is within this need for further development that we provide some of our reflections and recommendations for future reports looking to define an index similar to the one we proposed.

The first point is that metrics matter. By this we would like to highlight the importance of understanding that ultimately what gets written as a metric or indicator is what gets measured and is, therefore,

what will count. Metrics therefore need to be broad enough to capture the variety of issues relevant to its content area while at the same time not being specific enough to enable objective measurement.

However, in order to achieve specific and objective measurement, the technical challenges of such an index are significant. When assessing issues, such as nutritional adequacy and the diverse range of foods people eat, in order to be able to effectively and efficiently measure such criteria, there is the need for food data on the nutritional qualities of a given food and also to know the requirements of the given population under assessment.

Similarly, and perhaps more challenging, is the need for more research and better access to the environmental resource requirements for a much wider range of foods. Fortunately for our evaluation, meat, hamburgers and fast-food were a popular items of discussion in some of the resources we reviewed. However, this is not the case for many other food items that that different cultures around the world may use. For example, while a key focus of this report was about the impact of meat from industrialized farming operations, what is the impact of meat from hunted wild sources in more subsistence cultures? And how would the different resource impacts from this source influence the role that the given food plays in a sustainable diet?

Another important issue to consider beyond the technical challenges, is the political challenges and applicability of such an index. The reality is that such an index would be very inconvenient to some, especially those who have a vested interest in the production, distribution, sale and consumption of food that performs poorly in terms of sustainability. While in this report, the index was used to assess the diets represented by a corporation, further testing of the index on different sectors could be beneficial to understand the different applications of the index. In this report, the index was useful in terms of structuring our assessment and structuring our recommendations for enhancing sustainability. However, it may the case that such an index may be more applicable as guide for consumers to refer to in order to think about their food choices. Additionally, the index could be tested at a higher level by governments when designing policy and regulations relating to food systems. As suggested, we can see the index could possibly have a range of applications and that are not necessarily mutually exclusive.

However, if the index is to be used by a wide-range of sectors, there is a risk that such an index could be misused. That is, given the high degree of interconnectedness and dependance between many of the indicators we used (i.e. between access and nutrition), evaluation ultimately involves trade offs. The relationships between the different dimensions of a sustainable diet are often complex. For example, which is better for protecting biodiversity, farming more land organically or less land with heavy application of pesticides and fertilizers? Balancing these trade offs is fundamental to determining a sustainable diet. But the question inevitably stands, who gets to make the decision about which trade offs are right and for whom?

The risk is that the index could be inappropriately used by different sectors given their agenda to promote the sustainability of some criteria, while different aspects of sustainability also convoluted within some criteria are ignored or dismissed. By reflecting more closely on our proposed criteria of Cultural Relevance, a criteria which proved to be especially challenging in terms of understanding trades offs for a food business in a globalizing world.

### **Cultural Measurements (IM)**

As we began to define and identify specific verifiers that would properly measure the cultural relevance of a product, we found it extremely difficult to come up with ways to do so that would give us an accurate and objective measurement. Is a business culturally integrated if it is hiring local employees and procuring local ingredients? Is it considered culturally accepted by society if it enters and there are no protests against it and the food it sells? What are the true verifiers of these indicators to understand that overall feeling of a society? These are questions that we struggled with throughout this section but came to the agreement that this section will need to remain flexible in order to adapt to specific circumstances and determined case by case. The measurements will not give an exact measurement of whether or not something is culturally relevant, but the verifiers we chose would ensure that the right questions are asked, in order to peel the layers off this complex issue. We believe this would be an extremely interesting area to continue to investigate and that by addressing as a separate section to the social element it gave the MD-SDI a richer component. The importance of the cultural relevance across the board will stumble upon difficulties, but we hope that it would be just the beginning of a further investigation in looking at how cultural relevance could be measured and who has the right to decide it.

**Weighting? (IM)**

Another challenge we encountered frequently was the overlapping of issues. Sustainability, in general, often can be analyzed too broadly and can lose value in certain areas if not addressed. We wanted to ensure that all possible issues were taken into account within each section: environmental, social and cultural; without overlapping or discounting our points within the sections. This is where in hindsight; the weighting of the issues could have played a strategic role in analyzing the MD-SDI. By giving each indicator a weight of importance it would make it easier in adapting to specific cases depending on what areas deemed more relevant. Taking this into consideration it would have relieved the fact that in each section we could take into account all things into account similar to the way the GRI works, and whomever is utilizing the guidelines could pick or choose which indicators were relevant to their product or business.

Summary of Key Points for Further Research of the MD-SDI
<ul style="list-style-type: none"><li>● Detailed data about nutritional qualities of food</li><li>● Detailed data about resource intensity across different foods and different production methods</li><li>● How to evaluate criteria credibly and fairly, across the different sectors?</li><li>● How to assess tradeoffs? Who decides?</li><li>● How to weight them? Who decides?</li></ul>

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## PROJECT MCSUSTAINABLE

*How to Mainstream Sustainable Diets through McDonald's*



E.O.I. INTERNATIONAL MASTER OF SUSTAINABLE DEVELOPMENT & CORPORATE RESPONSIBILITY  
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## 1. Introduction

**Current Situation.** Whatever consumption patterns were sustainable on a planet of 6 billion people, will no longer be sustainable on a planet of 9 billion. Arguably one of the biggest issues currently facing humanity, is how to sustainably feed 9 billion people in 2050 without destroying the planet. Why is our current global diet and food system unsustainable? And what exactly does a sustainable diet look like? For example, the UN FAO has reported that raising animals for food contributes more to climate change than all transportation combined. Due to its impact on climate, land, and water resources, the urgent need to manage the consumption of meat in our diet has been widely cited. Despite this urgent need, global meat consumption is predicted to keep growing in the coming decades. Undoubtedly, we need innovative strategies to address the predicted trends of environmental depletion resulting from our global diet.

Not only does a future food system need to address environmental sustainability but it will also need to sustain human health on the planet. Currently, as a result of the global food system, populations are suffering from the “double burden of nutrition”, with 2 billion people overweight or obese and 1.5 billion living in hunger or undernourishment. Sustainable diets will therefore require both security of supply and accessibility to quality, nutritional products that are good for our health. In many developed countries, the food system is increasingly being dominated by cheap, processed food. Similarly, this trend is also now being witnessed in several of the developing countries. There is a great need to reverse these socio-economic trends and instead promote the development of more sustainable diets and supporting food systems.

**Problem Analysis.** In order to answer the earlier question of why our current global diet and food system is unsustainable, we completed a problem analysis to set the context for the report. The key challenges identified were categorized according to either environmental issues or socio-economic issues. The problems identified covered an extensive range of topics.

In section 1.1a, we reviewed the environmental impacts of industrial agriculture in terms of its major contributions to diminishing land and water resources, its significant contribution to the polluting of ecosystems and climate change, and the overall threat it poses to biodiversity. Based on these impacts, we concluded this section by proposing a set of environmental principles that a future food system must aim for if environmental sustainability is going to be achieved. In section 1.1b, we defined key terms such as food security, food availability, food access, and food use. While identifying key relationships between these concepts, we demonstrated how issues such as a lack of food availability and inappropriate food use are resulting in the major social, economic, and health challenges that are now facing food systems. In particular, there was a specific review of the impacts of industrialized food systems in countries like the United States. We concluded this section by highlighting the potential threats to future food security in a globalizing world, given the increasing interdependence of many countries in order to provide their citizens with sufficient supplies of nutritious food.

**Project Parameters.** The above sections demonstrated that, not only is there a broad range of sustainability challenges facing the food system, but similarly, there are also a broad range of players who are responsible for both the problems and possible solutions (i.e. private sec-

tor, governments, international organizations). For example, even beyond our problem analysis, there is a whole area of political factors (i.e. trade, subsidies) that can be attributed to causing problems in the global food system. Given this broad range, especially when dealing with such a complex concept like the food system and in order to provide the project with a practical direction, in section 1.2 we set distinct project parameters.

The scope of the project was set by the environmental and socio-economic challenges of the food system in relation to the contributions of the fast-food industry. Our justification for this scope was that this industry represents significant environmental impacts, promotes nutritionally poor products, and encourages cultural consumption habits that are detrimental to the development of sustainable diets within our future food system. Furthermore, for the purpose of this project, we specifically used McDonald's to represent the fast-food industry. In section 1.3, we explained our strategy for selecting McDonald's, arguing that McDonald's is the industry leader, with huge economic and geographical influence, and typically sets the standards for the rest of the industry through a range of issues from sourcing, to animal welfare, to marketing to children. To this effect, we see the most potential for positive change. If we can positively influence McDonald's, we can possibly revolutionize the fast-food industry as a whole, which would provide an important contribution to the development of a more sustainable industrialized food system.

From this we were then able to define our project objectives. Our **first objective** was to determine a set of practical recommendations to make McDonald's a force for good for the mainstreaming of more sustainable diets. Given the use of this concept of 'sustainable diets' and the challenging question that follows, what exactly does a sustainable diet mean? Our **second objective** was to propose a framework for the assessment of the sustainability of a diet.

## 2. What is a Sustainable Diet?

The challenge with defining this concept is that a 'sustainable diet' has different meanings in different contexts. That is, there is not one type of sustainable diet. Defining a sustainable diet is highly dependent on the environmental, socio-economic and cultural context. In 2.1a, we discussed the different environmental dimensions of a sustainable diet. For example, what is more sustainable? An organic apple imported from the other side of the world? Or an apple grown conventional with the heavy use of harmful pesticides and fertilizers? In section 2.1b, we explored socio-economic differences and what that means for a sustainable diet. For example, for low-income communities, does a sustainable diet simply mean putting enough food on the table regardless of its environmental and health impacts? In section 2.1c, we considered the influence of culture when defining a sustainable diet. For example, the cultural significance of meat and how this relates to food customs, traditions, and even religion.

**Universal Evaluation.** As exemplified above, while there are various dimensions to take into account when assessing if a diet is sustainable or not, we established that there is nevertheless a common set of factors across all diets that should be considered when determining sustainability. To develop the set of factors, we considered another similar concept, poverty. Like sustainable diets, poverty is not a one dimensional concept associated with just a lack of

income, but rather, it is an outcome of a range of factors, such as lack of health services, education and other living standards. In light of these factors, the Multi-Dimensional Poverty Index (MDPI) was created, which captures the different aspects of poverty. Like the MDPI, we have suggested the following criteria for our Multi-Dimensional Sustainable Diet Index (MD-SDI). 1. Protective and Respective of Biodiversity and Ecosystem; 2. Health; 3. Access and Availability; 4. Culturally Relevant. Together, these factors set the different boundaries in which sustainable diets could exist. The intention of this index is to provide an assessment guide that can be referenced across diverse situations.

**Methodology.** To assess the above criteria, we have further created a set of indicators that can be closely associated with performance on the given criterion. To support or reject performance on a specific indicator, a set of specific and measurable verifiers are then used to evaluate performance on the indicator. A 0-5 rating system is then used to award performance on the verifiers (0=no performance, 5=very strong performance).



### 3. The McFood System

The aim of this section was to examine McDonalds' place in the global food system. We first reviewed some statistics, most notably, that McDonald's serves approximately 68 million customers a day across 119 countries. We also review its history in terms of corporate expansion



to demonstrate the financial success of its business model. We then took a closer look at its business model to establish the different ways McDonald's earns revenue. The McDonald's Corporation has three sources of revenue: As an operator of restaurants, as a franchiser of its restaurants, and as an investor in properties. Together, along with the management of suppliers, these are understood as the "McDonald's system". The McDonald's Corporation does not make direct sales of food or material to its franchised restaurants, but instead, acts as a coordinator of the different suppliers and logistics between its franchisees. From this, what makes McDonald's so powerful in the food system is the number of restaurants it manages. This gives the corporation great purchasing and bargaining power. The size of the purchasing power, therefore, creates incentive for suppliers to be able to meet the demand. As a result, in countries like the United States, McDonald's is the biggest buyer of many food products such as beef, pork, potatoes and apples. Similarly, McDonald's is the biggest distributor of children's toys in the world.

With its relentless international expansion, or 'McDonaldization', we then focused the discussion on the McDonalds' system's impact on culture. Most notably, as a key contributor to the exporting of American food consumption habits. By detailing examples where McDonald's has been criticized for its influence on issues such as obesity, marketing to children and business ethics, we questioned the exact nature of McDonalds' relationship with society. For example, soon after the release of the documentary Super Size Me, McDonald's responded by removing its super size menu options. While initially, we can see the power McDonald's has to influence issues such as consumer health and obesity, we can also see how McDonald's tends to be reactive rather than proactive, and designing its products according to consumer demand.

Given the increasing spotlight of McDonald's in social debate and commentary, we then analyzed McDonalds' corporate response. To do this, we reviewed its marketing and positioning strategy with regards to sustainability issues, which is titled "On The Road to Sustainability". Relative to its competitors, we concluded that McDonald's was leading the industry on CSR initiatives but nevertheless, we also maintained that

McDonald's undoubtedly still has a long road ahead before it contributes to global sustainability. Given this need for improvement, we then conducted both a SWOT and PESTEL analysis in



order to establish the business issues that need to be managed by the McDonald's system in the future. The most key business issues identified then formed the basis of our following sections.

In section 3.2, we analyzed McDonalds' environmental impacts. We separated this analysis into two parts, based on scope of responsibility. In 3.2a we considered the environmental impacts of McDonald's products from an organizational perspective. That is, a limited scope to being responsible only for the impacts of its direct actions. In contrast, in 3.2b, we considered the impacts of McDonald's products from a life-cycle analysis perspective. While the results of section 3.2a highlighted that McDonald's has made considerable progress with reducing its environmental footprint with regards to issues such as packaging, restaurant energy management, and some sourcing certification initiatives, section 3.2b told a much different story. McDonald's sells more than 75 hamburgers every second. That is 6,480,000 hamburgers every day and over 2.3 billion hamburgers every year. Using approximate footprinting figures we calculated the following environmental impacts in order to demonstrate the environmental impacts that arise in order to supply McDonald's with 700 million kilos of beef per year.

Firstly, 105,000 square kilometers of land is required. This means that more than the entire land mass of Portugal is required just for McDonalds' yearly production of beef. Secondly, approximately 3 billion gallons of water per year are utilized by the corporation. In other words, 100,000 olympic sized swimming pools. Thirdly, approximately 20 million metric tons of CO<sub>2</sub>e per year or the same as 12 million cars on the road. As discussed in the report, the environmental costs in order to supply McDonald's with beef alone, excluding various other inputs, is enormous. Moreover, the analysis went deeper identifying further environmental impacts that exist within these figures and the industrialized food system McDonald's supports. For example, the land requirements represent the clearing of natural habitats, loss of biodiversity, land degradation, and social issues such as community displacement. Similarly, the water requirements represent a major source of pollution given the quantity of pesticides, fertilizers, growth-hormones, antibiotics and manure that come with industrialized meat operations.

Additionally, it was also analyzed how not only does the industrialized food system that McDonald's supports have significant impacts due to food production (i.e. clearing of the Amazon), but it also raises the question of the indirect impacts of how that food is later used. That is, we examined how factory farms (where McDonald's sources its meat) uses more food calories than they produce and because of this process of feeding grain to farm animals, one-third of the world's cereal harvest is now fed to animals instead of being used directly for human consumption.

This section concluded by questioning the logic of industrialized meat production and considered the many environmental and social benefits that could be realized if such vast quantities of cheap meat were not demanded by corporations such as McDonald's. Moreover, we questioned, until what point in the life-cycle should we hold McDonald's be accountable? And is it reasonable to expect McDonald's to take responsibility for the entire life-cycle of its Big Macs and its Double Quarter Pounders?

In section 3.3, we examined McDonalds' strengths and weaknesses in terms of quality of nutrition and food access issues. We considered the relationship between socio-economic status and how this impacts the quality of food certain demographics or cultures can access. On one hand, McDonald's represents a strength in terms of food access and availability because it provides affordable and widely available food items to people who are otherwise financially and physically excluded from more expensive and nutritious food options. However, the franchise's weakness within the context of sustainable diets is that the products typically served involve large quantities of unhealthy food. The discussion then reviewed McDonalds' perspective on its' corporate responsibility regarding the health and nutritional impacts of their products on consumers. The discussion suggests that, while McDonald's acknowledges that it plays an important role, their current initiatives do not go far enough to connect with and positively impact its' consumers. As McDonald's feeds 1% of the global population per day, they maintain the ability to dictate individual, communal, national, and global consumption habits.

In section 3.4, we explored McDonalds' influence and impact on different cultures through the image it represents, its marketing techniques, its corporate culture, and consumer value. In this section we demonstrate that the impacts of cultural change happen on both ends of the spectrum. Through our analysis, we maintain that McDonald's is changing different cultures around the world and is simultaneously adapting and transitioning as an enterprise due to cultural influence.

In many countries, McDonald's represents the infiltration of American culture across the globe through "McDonaldization". Entering countries globally, McDonald's has dealt with opposition due to the cultural implications that it could have, not only on local consumption habits but in what it has come to represent with its large golden arches and the assumption that the community is in need of a quick-service restaurant of cheap food. We discussed how when McDonald's enters new markets, effectively using marketing and media to not only sell their products, but indirectly to sell a new food culture and values regarding consumption. We argued that although all people should have the right to the same products and lifestyles, we provided examples of McDonald's introducing new Americanized values, which are replacing more sustainable, local, and cultural values; ultimately impacting consumption habits.

Despite the significant negative impacts that McDonald's has had in the past, we explored their ability to adapt and create culturally acceptable equivalent products and/or messages in order to reach their targeted consumers. Aligning their products, characters and palates with local characteristics is a defining factor of McDonald's business model and demonstrates their ability to adapt to local cultures in some areas of their business strategy. Through the reviewed examples, looking internally and externally, we came to the conclusion that though McDonald's influences local culture and the local culture has an equally strong influence on McDonalds' strategy.

#### **4. Concept Compatibility: McDonald's and Sustainable Diets?**

After analyzing the concept of sustainable diets and the concept of the McDonald's system, we were then able to evaluate the compatibility of the two concepts. That is, how would

McDonald's perform against our MD-SDI? In section 4.2, we provided detailed discussion and justification regarding why we gave McDonald's a certain score on each of the indicators. Table 1 on the following page summarizes the assessment. McDonald's final performance on MD-SDI is **1.94**. This represents that the type of diet produced by the McDonald's system represents diets that are low in terms of sustainability. While this result may come as no surprise to most, nevertheless, this evaluation was useful as it enabled us to identify key performance issues.

**Table 1 - Assessment summary of McDonald's on the MD-SDI**

Criteria	Average Score on Verifiers	Key Points
1. Protective and Respective of Biodiversity and Ecosystem	0.75 (very low performance)	<ul style="list-style-type: none"> <li>Given LCA analysis, poor performance on all the indicators</li> <li>Minimum points awarded for some initiatives (i.e. MSC certification)</li> </ul>
2. Health	2 (low performance)	<ul style="list-style-type: none"> <li>Nutritionally inadequate products, highly processed</li> <li>Promotes poor eating habits</li> </ul>
3. Access and Availability	4 (strong performance)	<ul style="list-style-type: none"> <li>Good performance on average price of food, proximity of distribution</li> </ul>
4. Culturally Relevant	2 (low performance)	<ul style="list-style-type: none"> <li>Negative impacts on cultural consumption habits</li> <li>Some points awarded for adapting menu to local conditions (i.e. religious beliefs) and integration of business into local economy</li> </ul>
<b>Average Performance</b>	<b>1.94 (low performance)</b>	

In section 4.2, we proposed McDonalds' possible strengths for improving its performance on the MD-SDI. The first strength we discussed was McDonalds' ability to adapt to changes in order to provide improved food access and availability. That is, McDonald's is able to use its expertise at operational efficiency and logistics to effectively manage changes in societies, such as economic recessions, while continuing to provide affordable food. The second strength we analyzed was McDonalds' ability to influence systemic change within the fast-food industry and supporting industries. As we demonstrated earlier, McDonald's has a range of influence and impacts on how society and industry operates. McDonald's can influence its customer's consumptions habits. It also can have considerable influence on determining how, what, when and why its suppliers produce. Not only does McDonald's influence its own consumers and

suppliers behavior, but as the industry leader, its actions also influence the behavior of its competitors and competitor's suppliers, which ultimately creates systematic change in the industry. Systematic industrial change which is exactly what the current food system requires if it is to align itself to overcome future challenges. It is within this strategy to bring about change, that we see the strength of McDonald's to contribute to a sustainable food future. The final strength we examined was its ability to sell sustainability to consumers. Much of McDonalds' success as a business can be attributed to its effective marketing and communication strategies. McDonald's knows how to reach the masses while at the same time customizing its messages to their target audience. It knows how to market across regions, cultures, and generations. If this ability to sell could be used to send positive messages about responsible consumerism, McDonald's could shift consumption habits in more sustainable directions.

While above we proposed McDonalds' potential strengths for mainstreaming more sustainable diets, such propositions would not be complete without a justifying the business case of why McDonald's should care about sustainability. Therefore, in section 4.2, we outlined the following reasons. **Maintaining competitive advantage**; while McDonald's may currently be regarded as the sustainability leader within the sector, this may not be the case in the years to come especially as new competitors with a focus on sustainability enter the market. We reviewed the recent successes of enterprises such as Chipotle with its local, organic, transparent sourcing policy, and Max Burgers with its Co2 footprinting and promotion of environmentally friendly products. What the above examples demonstrated for McDonald's is that sustainability issues are becoming an important issue through which to maintain bonds with consumers and stay relevant in the market. This is a competitive point that is likely to become increasingly important as "eco-minded Millennials" move into the workforce, and will typically prefer companies that perform well on social and environmental sustainability issues. **Minimizing future risks**; the next reason why McDonald's should care about mainstreaming sustainable diets is because it represents sound risk management. With key issues relevant to the fast-food industry, from climate change to obesity that are not going away anytime soon and, on the contrary, are likely to worsen, it is increasingly likely that governments will be forced to impose regulations and taxations on the private sector to mitigate the impacts on public systems. What would McDonald's do if it had to pay tax on how much Co2 or fat was embedded in its products? How much would the Big Mac really cost? If McDonald's starts aiming for more sustainable products now, and such legislation or taxations did happen to gain momentum in the near future, McDonald's will undoubtedly be better positioned to manage the changes and avoid the negative impacts on business. **Better governance, better business**; as discussed in the environmental impact analysis of the report, McDonald's already understands from its efforts to reduce packaging waste, that corporate governance with a focus on sustainability can not only be good for the environment, but also represents considerable financial savings. That is, a focus on sustainability can drive better governance across the entire business and not just in corporate social responsibility related domains. This, in turn, can result in greater operational efficiencies and value adding management practices.

## 5. Recommendations

### Recommendations for McDonald's

**Recommendation 1: Find the Electric Car of the Fast-Food Industry.** This recommendation was founded on a comparison of the fast food industry to the automotive industry. We discussed that, for the automotive industry, the electric car can be seen as a possible solution that enables humanity to continue to enjoy the convenience of driving while adapting to population growth and resource constraints. But what about hamburgers for the fast-food industry? We know that McDonald's alone currently sells approximately 2.6 billion a year, so by 2050, who knows how many billions more it could possibly be selling. And will there still be a stable climate and enough land and water resources to accommodate for increased production demands? To answer this question, we recommended that McDonald's look to innovate its products. We explored a range of low environmental impact options, from using innovative plant-proteins as a meat-alternative, hybrid meat-veg options, to using cultured meat (i.e. animal meat grown without the animal). While the possible product innovations we explored ranged from the simple to radical, across both the short and long term, they had the same end goal in common. That is, the end goal of this recommendation would be to align the environmental footprint of McDonalds' products with its expected growth in sales given the natural resource constraints to business in the 21st century.

**Recommendation 2: McBenefits Reward Scheme.** For this recommendation, we also discussed another important aspect. If McDonald's really wants to be on the "Road to Sustainability", not only do they have to offer more sustainable products, but critically, they also have to contribute to influencing consumers towards these more sustainable options. So how exactly do you incentivize consumers to trade in their BigMac for a McVeggie? We proposed that this could be achieved by enticing consumers with the very thing that attracts most consumers to McDonald's in the first place: low prices and convenience. What if consumers were rewarded for making more sustainable choices? What if consumers were rewarded with price discounts and free products for their loyalty of buying sustainable products? What if consumers only had to conveniently swipe a card to receive the aforementioned benefits? What if McDonald's introduced the **McBenefits** reward system? We recommended that this system would go hand in hand with increasing the scope of responsibility for its sustainability impacts. That is, instead of simply taking responsibility for the CO2 emissions of its restaurants, McDonald's should also take responsibility of the CO2 in its products and communicate this to its customers. By labeling all of their products with their respective impacts, and assigning a points system based on the level of impact, such as a CO2 or water efficiency rating, McDonald's could reward customers who choose the more sustainable options. Customers could accumulate points and redeem the points for discounts off future meals. The points system would have to be designed to be easily accessible and understandable for consumers to make quick decisions. This reward system could also increase loyalty amongst its customers and attract new ones, enabling McDonald's to sell more of its sustainable products, and overtime, as sustainable food choices becomes more popular, it could make the sustainable product offerings the core of its menu. The end goal of this recommendation is clear: to develop a consumer marketing system that effectively contributes to changing society's patterns of consumption. To change the way we think about the impacts of our decisions and to be able to



enjoy the benefits of responsible consumerism, from the small ones (i.e. economic savings) to the large ones (i.e. reducing our environmental footprint).

**Recommendation 3: Health Footprinting.** As discussed throughout the report, McDonald's has the opportunity to influence consumer health through the nutrition of its product. While we recognize that McDonald's designs its menus according to consumer demand, we recommended that McDonald's becomes more active in shifting demand for healthier products. Current labeling of nutritional information is not enough. We recommended that this could be achieved through increased community engagement that aims to educate its consumer about healthy eating and product assessment. We discussed how the "health footprinting" assessment tool could be used in conjunction with the McBenefits reward system. Through this positive reinforcement, McDonald's has the potential to influence patterns of consumption to not only more environmentally sustainable options, but just as importantly to healthier choices. Through the McBenefits reward scheme, customers who are otherwise financially marginalized from more expensive and healthy eating options, would also be able to use the scheme to make healthy eating more accessible. Moreover, the scheme would provide the initial motivation to introduce people to the experience of healthy eating, especially if it implies the ability to reinforce dietary changes in the future with further economic benefits and rewards.

**Recommendation 4: McLocal.** Our next recommendation to integrate the MD-SDI into McDonald's strategy is to capitalize on the independently owned franchises to create a policy in which it integrates a more culturally relevant menu through local procurement and products. This recommendation would require the independent franchises to procure a percentage of their products locally through strategic partnerships with local suppliers and supporting legislative incentives for local producers as well. The program under which it would be called, would be "Meet Old McDonald" and would consist of an entire campaign that not only procures local ingredients, but promotes the local farmers that supply it and addresses the cultural relevance and integration of McDonald's to an area.

To ensure the promotion and success of new local ingredients and products into the McDonald's menu, we would integrate it into the McBenefits system to further incentivize consumers to support locally produced products. Though we identify precautions such as over-purchasing and the loss of local business or restaurants, we believe it is an important first step for McDonald's to take on a small scale.

### **Recommendations for MD-SDI**

In this final section, we reflected on the effectiveness of our proposed MD-SDI. Given the objectives of the report, we concluded that the proposed index served its purpose. However, we did face some challenges designing and using the MD-SDI, and it is from these experiences that we provided recommendations for future projects looking to define a similar index. The first point is that metrics matter. What gets defined as a metric or indicator is what gets measured and is, therefore, what will count. Metrics, therefore, need to be broad enough to capture the variety of issues relevant to its content area, while at the same time, not being specific enough to enable objective measurement.

However, in order to achieve specific and objective measurement, the technical challenges of such an index are significant. We recommended that greater research and better access to



the environmental resource data of food is required if such an index is going to be numerically applied. Fortunately for our evaluation, meat, hamburgers and fast-food were a popular items of discussion in some of the resources we reviewed. However, this is not the case for many other food items that different cultures around the world may use. For example, while a key focus of this report was about the impact of meat from industrialized farming operations, what, for example, is the impact of meat from hunted wild sources in more subsistence based cultures? And how would the difference in resource impacts from this source influence the role that the given food plays in a sustainable diet?

Another important issue we recommended for consideration beyond the technical challenges, is the political challenges and applicability of such an index. The reality is that such an index would be very inconvenient to some, especially those who have a vested interest in the production, distribution, sale and consumption of food that performs poorly in terms of sustainability. While in this report, the index was used to assess the diets represented by a corporation, we also recommended that further testing of the index on different sectors could be beneficial to understand the potential applications of the index. In this report, the index was useful in terms of structuring our assessment and structuring our recommendations for enhancing sustainability. However, it may be the case that such an index is more applicable as a guide for consumers to refer to in order to think about their food choices. Additionally, the index could be tested at a higher level by governments when designing policy and regulations relating to food systems. We concluded that the index could possibly have a range of applications and that are not necessarily mutually exclusive.

However, if the index is to be used by a wide-range of sectors, we explored the possible risks that such an index could be misused. That is, given the high degree of interconnectedness and dependance between many of the indicators we used (i.e. between access and nutrition), evaluation ultimately involves trade offs. The relationships between the different dimensions of a sustainable diet are often complex as demonstrated in our report. Balancing these trade offs is fundamental to determining a sustainable diet. But the question inevitably stands, who gets to make the decision about which trade offs are right and for whom? In response to this question, we proposed the possibility of using a visible weighting system that could be tailored given the purpose and context of the evaluation, while at the same time enabling transparency to see what indicators were deemed more important.