## Education for Sustainable Development and Meat Consumption among Inhabitants of Two Maltese Districts – A Qualitative Study

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*Abstract:* Malta and Gozo, two small islands forming part of the Maltese archipelago, are so near yet so distinct. As the two islands possess differing geographical features, two districts were selected – the predominantly urban Northern Harbour District (NHD) in Malta and the fertile rural district of Gozo – the main aim being to determine whether there is a relation between the inhabitants' geographical location, the extent of meat consumption and the possible links of education for sustainable development to a sustainable diet. In fact, global patterns of meat consumption differ between and within countries. In view of this, the role played by the geographical location together with other motivating factors affecting meat consumption were explored, as also the level of awareness related to the environmental impact of meat production. Awareness on how our dietary choices impact our health and the environment is vital and the key vehicle required for citizens to be informed is Education for Sustainable Development (ESD).

The qualitative data was collected through four focus groups – two for each district – with the data collected being mainly analysed through thematic analysis. Based on the results emerging from the transcribed focus group texts, this study reveals that the absolute majority of participants in both districts are meat eaters although their meat consumption patterns differ. Gozitans are still more inclined to adhere to the traditional way of life, conforming to religious practices by including a variety of non-meat local produce in their menus. While taste and health are the two most determining factors for consuming meat, chicken is the preferred meat of both districts. The absolute majority are unaware of the negative environmental impact of meat production and consumption, although Gozitans are more knowledgeable about current farming systems.

This study therefore reveals that geographical location does have an influential role in the dietary patterns of its inhabitants and that environmental attitudes are not a strong deciding factor. This study continues to uphold the vision that culture should be considered as one of the main pillars of ESD.

Keywords: Malta, Gozo, meat production and consumption, education for sustainable development, sustainable diet.

#### **1. INTRODUCTION**

"Tell me what you eat, and I'll tell you who you are," wrote renowned gastronome Jean Anthelme Brillat-Savarin in 1825. Eating is never a purely biological activity as the consumption of food, whether simply or elaborately prepared, is always imbued with meaning, which is understood and communicated in various symbolic ways (Claxton, 2008). The type of food we eat, how we integrate ingredients to make a certain recipe and how we consume and share it, expresses the actual essence of who we are and where we are from (Tibbitts, 2013).

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Food choice, like any complex behaviour, is influenced by many interrelating factors (Shepherd, 1999) – geographical, environmental, social, cultural and economic factors all interact in a complex manner to shape dietary consumption patterns (World Health Organization (WHO), 2003). Adrian Bebb, senior food, agriculture and biodiversity campaigner for Friends of the Earth (FOE) sums it up perfectly when stating that:

Diet is no longer a private matter. Every time we eat, we are making a political choice, and we are impacting upon the lives of people around the world, on the environment, biodiversity and the climate. Huge amounts of resources go into the food on our plates. Sustainable alternatives exist to the dominant destructive, corporate-controlled and intensive global system for producing and consuming meat. (FOE Europe, 2014, para. 4)

The way forward, as stated by the United Nations Environment Programme (UNEP) report (2010), is that "A substantial reduction of impacts would only be possible with a substantial worldwide diet change, away from animal products" (p. 82). According to Burlingame and Dernini (2012), information and education about appropriate food choices is essential if the present global situation is to improve, given it is within a sustainability framework.

#### 2. BACKGROUND TO THE STUDY

The Maltese Islands, situated in the central Mediterranean Sea, are comprised of an archipelago of five islands – Malta  $(246 \text{km}^2)$  being the largest, followed by Gozo  $(67 \text{km}^2)$ . The culture of Malta has been enriched by the many different societies that have come in contact with the Islands throughout history. Gozo bears a number of similarities to Malta, yet is considerably diverse. Being more scenic, greener and quieter than the mainland, Gozo is currently being promoted as an eco-island (NSO, 2013a).

According to the 2011 Census the population of Malta nearly doubled from 211,564 in 1911 to 417,432 in 2011. Classified by district, the most populated was the NHD, with 120,449 residents, or 28.9% of the entire population, compared with 31,375 residents in Gozo, the smallest district. Mainland Malta (1,566 persons/km<sup>2</sup>) is more densely populated than Gozo (457 persons/km<sup>2</sup>) with the NHD (5,014 persons/km<sup>2</sup>) being the most densely populated (NSO, 2014).

Simultaneous to population growth, lifestyle changes developed, leading to a higher quality of life, which in turn led to a higher consumption of different foods. The new food choices however did not always translate into a healthier quality of life. A statistical report conducted in 1839 stated that "the Maltese use very little animal food; bread with the vegetable of the country, and occasionally a little fish, forms their principal sustenance" (p. 20). In contrast, almost 150 years later, WHO (1986) reported that the Maltese diet is unhealthy, being rich in fats and sugar and low in fibre. This shift from the traditional Mediterranean diet to a less healthy one is clearly shown in **Table 1** which reveals the substantial increase in meat consumption over the years:

Year	1961	1970	1980	1990	2000	2002
kg/person	34.7	52.7	68.3	71.1	78.6	86.9

 Table 1: Meat consumption in Malta: 1961 – 2002 (Brown, 2009)

This trend continued and Malta's 'Household Budgetary Survey' of 2008 showed that, of the annual budget dedicated to food and non-alcoholic beverages, a typical household spent 21% on meat, followed by bread and cereals (18.4%), and fruit and vegetables (18.3%) (NSO, 2010). More recently, the NSO (2013b) reported that the final consumption expenditure of private households on selected food items in 2011 and 2012 was also highest for meat followed by bread and cereals; dairy products and eggs; and vegetables, among others.

#### **Education for Sustainable Development in Malta:**

Sustainable development is crucial for all countries and, even more so, for small islands such as Malta due to the limited resource base and high population density (Mifsud, 2012). Malta has led, as well as participated, in international initiatives directed at obtaining global agreements aimed at achieving a world-wide collective effort to guarantee sustainable development – ranging from the Kyoto Protocol to the aggressive leading stance that is being taken by the European Union (Ministry for Resources and Rural Affairs, 2012).

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In Malta, ESD in the formal, informal and non-formal sectors is mainly addressed by the Education Division, the Malta Environment and Planning Authority (MEPA), the University of Malta and various environmental NGOs (Briguglio & Pace, 2004). Lately ESD was recognized as one of the cross curricular themes of the National Curriculum Framework (NCF) (Ministry of Education and Employment, 2012) aimed at making educational institutions sustainable. In a 2011 study entitled 'Maltese Youth and the Environment: A Qualitative Study' a relatively low positive behaviour towards the environment was indicated (Mifsud). In fact, a comprehensive ESD programme is still lacking in our education system.

It is clearly evident that "education is essential to sustainable development" (UNESCO, 2012) as through ESD we can achieve lifestyles based on economic and social justice; food security; ecological integrity; sustainable livelihoods; respect for all life forms; and strong values that foster social cohesion, democracy and collective action (UNESCO, 2009). ESD projects not only acknowledge the importance of ESD "to recognise that we must live within the limits of nature's systems" (Centre for Environmental Education, 2007, p. 4) but people are also simultaneously empowered "to actively participate in shaping an ecologically sustainable, economically efficient and socially just environment, while remaining mindful of the interconnectedness between the local and global dimensions" (Boyadjieva et al., 2008, p. 5).

#### 3. METHODS

For this study a dual-method grounded approach – quantitative and qualitative – was adopted with the researcher opting for a 'sequential strategy' where the quantitative approach – telephone survey - initially gathered facts, complemented by the qualitative strategy – focus groups – to explore feelings and perceptions that had not yet been explored in-depth. For the purpose of this paper, only the qualitative part of the research will be considered.

The focus groups were semi-structured and non-probability sampling was adopted for the selection of the twenty-eight participants taking part in the four focus groups. Participants were selected from those who had taken part in the telephone survey and selection was based on non-random criteria as it is "advantageous to bring together a diverse group to maximise exploration of different perspectives within a group setting" (Kitzinger, 1995, p. 300). Figure 1 depicts the diverse occupation of participants taking part in this study.

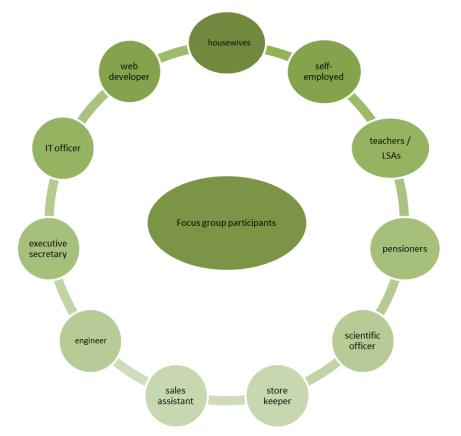


Figure 1: Diverse occupations of participants of both districts under study

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The analytical techniques that lend themselves to focus group data are constant comparison analysis, classical content analysis, keywords-in-context, and discourse analysis (Onwuegbuzie, Dickinson, Leech, Zoran, 2009). The principal method applied in this thesis is thematic analysis. Moreover, in this particular study the multiple groups enabled the researcher to assess if the themes that emerged from one group also emerged from other groups.

The researcher however did encounter a number of limitations. The main hurdle was to coordinate a convenient time so that those selected could take part. In fact several of those contacted could not attend at the set time while others could not confirm their attendance resulting in the researcher having to approach others. This presented certain difficulties for the researcher as participants were not to be selected randomly but care was taken to include people of different ages, occupations and status.

#### 4. THE FINDINGS

Six major themes emerged from the four focus group discussions, being:

- Maltese are meat consumers (main theme)
- Meat production health and animal welfare concerns
- Preference for local meat
- Influence of religion
- Distinctive dietary habits
- Level of environmental awareness

The first four themes reflect similarities among both districts' focus groups while the latter two reveal marked differences (see Figure 2).

Differences	
Distinctive dietary habits	Similarities Meat production - health and animal welfare concerns Maltese are meat
Level of environmental awareness	Preference for local meat consumers
	Influence of religion

Figure 2: Trends in meat consumption in Gozo and NHD

From the four focus group sessions held it was clearly evident that those taking part in both districts are definitely meat lovers. First and foremost, all participants stated that they consume meat more than three times weekly. All participants were very forthcoming and different views were put forward for this frequency of meat consumption. Being a prerequisite in a human being's diet as part of a balanced diet was one such reason.

#### 1.1 - To obtain particular vitamins from various foods – balanced diet.

Tvarja l-vitamini biex tieħu vitamini minn hawn u minn hemm – bilanċjata.

(Gozitan, female, ex-teacher, 64 years old)

### 1.7 - I feel that it depends on the type of meat one buys – there is meat which is affordable and meat which not everyone can afford.

Jien naħseb il-laħam skont x'tixtri, hemm laħam li jista' jilħqu kulħadd u hemm laħam li mhux kulħadd jista' jaffordjah.

(Gozitan, female, Learning Support Assistant, butcher's wife, 48 years old)

#### 3.1 - I think it's the family preference rather than the price.

Jien nahseb skont il-familja x'tippreferi tiekol, milli l-flus.

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(NHD resident, male, architect, 26 years old)

#### 4.1 - Health-wise more than money-wise.

Iktar healthwise, iktar mill money wise.

(NHD resident, male, Health Department, 38 years old)

#### 3.5 - I consider meat to be very expensive.

Jien il-laħam narah wisq expensive.

(NHD resident, male, Web developer, 28 years old)

Where chicken is concerned, all participants of different ages showed their preference for this white meat because of its health benefits.

### 4.3 - If I had to choose I would opt for the the meat which contains the least fat although it may be slightly more expensive ... we consume mainly chicken and only a little red meat.

Jekk ikolli naghżel bejn laham u iehor naghżel laham li ghandu inqas xaham minkejja forsi li l-prezz ikun naqra iktar ... ma nehdux hafna laham ahmar, chicken l-iżjed.

(NHD resident, male, Apprentice Engineer, 22 years old)

The four focus group sessions revealed that meat is valued highly in both districts, making reference to the fact that meat dishes are always present on the table during special holidays and occasions. The butcher's wife in fact mentioned that a substantial increase in sales occurs during such times.

#### 1.7 - At Easter, the village feast, Christmas and New Year – the amount of meat purchased is much greater than usual.

Easter, il-festa, il-Christmas u n-New Year – dawk huma skossi kbar iktar minn tas-soltu.

(Gozitan, female, Learning Support Assistant, butcher's wife, 48 years old)

#### 2.2 - In Malta we have the mentality that meat supersedes other foods.

Insomma Malta għandna mentalità li laħam qabel kollox.

#### (Gozitan, housewife, 45 years old)

In addition, most focus group participants raised their concern about the injections and medicines which are being administered to animals. It was also highlighted that the difference in the raising of animals is also affecting quality and taste. One Gozitan participant expressed her disappointment that in Gozo free-range meat is not available. A number of participants believe that being aware of the meat production process can lead to better choices with some even willing to pay more.

# 1.7 - In the past a chicken required six months to be fully grown whereas today with the feed and injections being administered only six weeks is required ... this all for the financial benefit of the producer but then our health will suffer.

Illum certu laħam fejn dari konna rridu 6 xhur biex noqtlu tigiega llum f'6 gimgħat jigu bil-labar u bl-ikel li jtuhom ... huma biex ikabbru l-but tagħhom però mbagħad hemm is-saħħa fin-nofs.

(Gozitan, Learning Support Assistant, butcher's wife, 48 years old)

### 2.4 - The way in which animals are being raised with the aim to enhance growth is negatively affecting our lifestyle as we are being subjected to more illnesses.

Iktar ma qed jigu mkabbrin f'affarijiet biex huma jikbru qabel qed jirrizulta f'lifestyle ta' bniedem li qed isofri hafna mard.

(Gozitan, female, Scientific Officer, 27 years old)

3.2 - In my opinion if there is more awareness one will think twice before consuming meat.

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Naħseb iktar ma jkun hawn awareness aktar dak li jkun jaħsibha darbtejn jekk ma jikolx laħam jew le.

(NHD resident, male, Executive Secretary, 26 years old)

#### 2.1 - There is a great difference between a chicken purchased from a home farm and another purchased commercially.

Jekk inti xtrajt tigiega mrobbija god-djar u xtrajt tigiega kummercjalment hemm differenza kbira.

(Gozitan, male, self-employed, 36 years old)

### 3.7 - If I were to make a choice I would choose free-range. One at least knows that the animal has been raised naturally. We need to promote this type of thinking.

Imma jekk ha nigi naghżel bejn il-laham li ha nixtri naghżel il-free range. Tghid tal-inqas ghexu hajja naqra ahjar. Nippromwovu tipo dak it-tip ta' hsieb.

(NHD resident, female, teacher, 30 years old)

### 1.1 - I am ready to pay more and actually do so when buying a rabbit knowing that it grew naturally and without any injections having been administered.

Jien lesta nħallsu iktar u ntiha ħafna iktar flus għall-fenek basta ma jkunx fih labar.

(Gozitan, female, ex-teacher, 64 years old)

This belief led to the question of how one can be sure that the purchase is a genuine product:

#### 4.1 - What guarantee do you have?

X'garanzija ħa jtik?

(NHD resident, male, Health Department, 38 years old)

1.1 - ...naturally raised livestock do exist but where mass production is concerned I don't know how this can be achieved without the administration of medicinals as the product would then be very expensive.

...trobbija bla medicini hemm imma ma nafx dawn il-mass production kif tagħmilha mingħajr medicina għax dak imbagħad ikun għali ħafna.

(Gozitan, female, ex-teacher, 64 years old)

Moreover, both districts participants' main preference is for local meat. Participants were convinced that local meat is better and more genuine, furnishing a number of attributes to its freshness and taste, in particular. One Gozitan participant remarked that when consuming local meat we are decreasing the negative environmental impact.

### 4.3 - ...more fresh, contains less preservatives, requires less transport ... I can choose the amount I require as when it is packed one has to buy the whole packet.

...iktar frisk, ma jkunx hemm hafna preservattivi, trasport ... nista' naghżel kemm niehu ghax go pakkett trid tixtri lpakkett kollu.

(NHD resident, male, Apprentice Engineer, 22 years old)

#### 2.2 - Frozen meat has a very different taste.

Tal-friża ntiegħmu differenti ħafna.

(Gozitan housewife, 45 years old)

#### 2.1 - You see the difference between local meat and that which is imported, local meat is more genuine.

Tara l-varjazzjoni bejn ta' Malta għal ta' barra, ta' Malta jkun iktar ġenwin.

(Gozitan, male, self-employed, 36 years old)

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1.1 - When we purchase the Maltese product we are decreasing the carbon footprint, in terms of transport for example. As Malta is small in area only short distant transport is required and this in turn reduces the negative environmental impact. Moreover the purchase of local products encourages local farmers.

Mela jekk nixtru l-prodott Malta nkunu qeghdin infaddlu hafna dak li nghidulu l-carbon footprint ghax int tkun pereżempju sakemm jigi minn barra are kemm ha biex wasal. Allura ahna fic-cokon malajr jasal allura nkunu qed insalvaw jekk nixtru l-prodott taghna stess u anke pereżempju lill-bidwi nkunu qed naghmlulu l-kuragg.

(Gozitan, female, ex-teacher, 64 years old)

#### 1.1 - We are helping the local economy as capital remains in Malta and not exported.

Inkunu qeghdin nghinu l-ekonomija ghax inkunu qed infornu izjed flus fl-ekonomja taghna milli tohrog'il barra.

(Gozitan, female, ex-teacher, 64 years old)

One of the main factors leaving an impact on the meat consumption of both districts' residents is one's religion. In the Roman Catholic religion today the two main days of fasting and abstinence when the consumption of meat is forbidden are Ash Wednesday and Good Friday. In the past meat was forbidden every Wednesday and Friday during Lent. Yet the focus group discussions revealed that this custom is still practised by many. In fact during Lent the majority of all participants adhere to the tradition of not eating meat.

#### 3.1 - My mother still follows the concept of serving fish instead of meat on Wednesdays.

Jiena ommi għadha ddaħħal dak il-kunċett tgħid nhar t'Erbgħa titfa' l-ħut flok laħam.

(NHD resident, male, 26 years old)

#### 1.5 - I never cook meat on Fridays.

Nhar ta' Ġimgħa qatt ma nsajjar laħam.

(Gozitan housewife, 70 years old)

#### 1.6 - That is how I was brought up at home and I have continued in the same way.

Hekk trabbejt u hekk bqajt.

(Gozitan, female, ex-teacher, 69 years old)

An interesting point which emerged from the Gozitan participants, and was completely lacking in those of the NHD, was the belief that Gozitans value food more than the Maltese due to their different lifestyle. Gozitans seem to value home-made cooking more and are also proud of their local cuisine and are still attached to traditional meals. Pork and rabbit are by far much more popular among the Gozitans as these types of meat are highly consumed in Gozo. This reflects the distinctive Gozitan cuisine, still under the influence of traditional recipes. In fact in the Gozitan focus group discussions participants made reference to local produce – vegetables and meat – and the inclusion of these in daily meals. In fact, one Gozitan emphasized that the Gozitan diet is superior and according to two others, Gozitans follow a traditional lifestyle preferring to consume home-made food in contrast to the Maltese who, due to their busy schedule, tend to consume more junk food.

### 2.4 - I think that in Gozo, even though our lifestyle is gradually becoming similar to that of the Maltese, we still prefer to consume home-cooked meals rather than junk food.

Naħseb aħna għat-tip ta' lifestyle Għawdex għalkemm qed niġu bħall-Maltin għad baqgħalna lifestyle li nsajru d-dar u mhux li nieklu ħafna junk food.

(Gozitan, female, Scientific Officer, 27 years old)

#### 2.1 - In Gozo we still cook and consume a lot of soups such as vegetable soup - as they did in the past.

Imma naħseb Għawdex għadna nagħmlu u nieklu ħafna sopop bħall-minestra – dik għadha fil-menus l-antiki.

(Gozitan, male, self-employed, 36 years old)

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### 2.3 - We have something else – we have our fresh cheese as many people still rear sheep, so we are able to substitute meat for cheese even when preparing soups such as 'soppa tal-armla' (widow's soup).

U aħna għandna oħra – għandna l-ġbejniet, hawn ħafna nies ikollhom in-nagħaġ u hekk allura jużaw il-ġobon flok illaħam, nagħtu każ tagħmel soppa tal-armla.

(Gozitan, female, pensioner, 72 years old)

1.7 - During Lent fresh broad beans are a popular addition to the cheese pies.

Fir-Randan ikun haw nil-ful u naghmluhom mat-torti tal-gbejniet.

(Gozitan, male, Learning Support Assistant, 48 years old)

A characteristic of traditional meals is the method of cooking and this too was brought up:

### 1.7 - Time is the secret – for example today everyone is in a hurry and so turn to meals which can be prepared quickly ... slow cooking is the key.

Hemm ukoll is-sigriet tal-ħin, pereżempju llum kulħadd mgħaġġel qisek tagħmel xi ħaġa ta' malajr ... is-sigriet tal-ikel hu li jsir bil-mod.

(Gozitan, female, Learning Support Assistant, 48 years old)

The level of environmental awareness among the Gozitan participants was much higher than those of the NHD who simply made reference to the consumption of energy as having a negative environmental impact. Discussions among the Gozitan participants in fact demonstrated that in comparison to those taking part in the NHD, they are more knowledgeable about the farming system in Gozo – the fact that more regulations exist, that farmers are more aware and that farms work mechanically were all mentioned. Gozitans are in fact more prone to experience farm life.

#### 1.4 - There is much more consumption of energy on farms as they are mechanically operated.

Issa bhall-ambjent forsi l-mod kif qieghed tghid int illum hemm izjed hela ta' dawl gol-farms ghax kollox magni kollox bid-dawl.

(Gozitan, male, Learning Support Assistant, 32 years old)

#### 1.4 - I went on a cattle farm recently – it was clean but water was continually running.

Jien mort wiehed tal-baqar m'ilux – nadif iva imma l-ilma l-hin kollu ghaddej.

(Gozitan, male, Learning Support Assistant, 32 years old)

#### 1.1 - In order to extract water much electricity is required so there is a bigger demand on the powerstation.

Il-powerstation kemm trid taħdem iktar biex tippompja dak l-ilma.

(Gozitan, female, ex-teacher, 64 years old)

#### 1.6 - The fact that we are now part of the European Union has helped us to be more conscious of these things.

Però anke din li aħna msebħin fl-Unjoni Ewropea ġejna iktar konxji tal-affarijiet.

(Gozitan, female, ex-teacher, 69 years old)

### 1.1 - All animals are registered so if an animal dies one will not risk dumping the carcass in a valley for example as in the past.

U jekk l-annimal imur bhux bhal qabel titfghu 'l hawn u 'l hinn bhal go xi wied kif kienu jaghmlu qabel ghax illum ikunu miktubin.

(Gozitan, female, ex-teacher, 64 years old)

Thus, regarding the environment, NHD participants seemed more detached – a factor which may result from the fact that they are urban dwellers. Their responses were based on what they had read or heard and not based on personal experiences. The majority of NHD participants stated that meat production is not having a negative environmental impact. In fact one participant claimed that humans and not animals are the source of negative environmental harm.

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Differences did emerge among both districts, primarily in the type of meat consumed, knowledge about agriculture practices and environmental awareness. The channel that seperates the two islands has led the Gozitans to develop a distinct culture with their own particular traits – one being their local cuisine which still reflects the traditional way of life.

#### 5. DISCUSSION

Every mouthful, every meal, can tell us something about ourselves, and about our place in the world (Bell & Valentine, 1997). The main three categories that are commonly used in studying food choice are factors related to food; to the individuals making the choices; and to the external economic and social environment factors related to food, person, and environment (Shepherd, 1999). As a matter of fact, food consumption patterns are not equal for all segments or regions within a given population (Kennedy, 2002).

This study reveals that there exist differences between the inhabitants of both districts implying that the geographical location does have an influence on the dietary habits of its inhabitants mainly due to the differences arising from their respective urban and rural characteristics. In fact, according to Horrigan, Lawrence and Walker (2002) those who move from rural to urban areas generally increase their consumption, including meat. According to Bell and Valentine (1997), it is by exploring geographies of food consumption that we can begin to unpack the role food plays in constituting place identities, giving (post) modern Western societies as an example, where food has long ceased to be merely about sustenance and nutrition – being packed with social, cultural and symbolic meanings as well.

This study also revealed that the geographical location contribute to different cultural trends, the practice of religion presenting an important example. In fact, according to a local study entitled 'Maltese and Gozitans: A social identity' there exists in Gozo a distinct culture from that which pertains to mainland Malta (Mamo, 2012). The social-cultural significance of meat and other animal foods in one's diet is probably the most important determinant of meat consumption (Southgate, 1997), a factor confirmed in this study. Thus, for local campaigns regarding ESD to be successful, it is fundamental that the current scenario be taken into consideration so that a strategy will be developed accordingly. According to UNESCO (2014), one of the characteristics of education for sustainable development is that it is locally relevant and culturally appropriate.

Education is vital for a more sustainable future (UNESCO, 2012). In order to create a sustainable food system it is crucial to cultivate a food culture in which consumers are 'food citizens' – educated to understand the impacts of their food choices on social, ecological and economic sustainability (Lang & Heasman, 2004). One particular factor of importance which emerged was the lack of awareness which exists where the direct relationship between meat production and consumption with the environment is concerned. Although people are aware that their health is affected by the food they eat, the impact that food production and consumption has on the world's resources is less well known (European Commission, 2014).

Following the discussion of results, the main areas that affect meat consumption as discovered by the research and the links of these to education and ESD were incorporated into a model that attempts to illustrate the thought-provoking relations found.

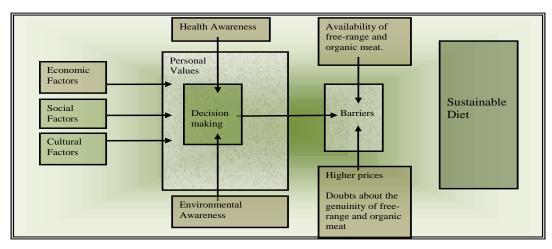


Figure 3:Sustainable diet and ESD Model

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#### 6. RECOMMENDATIONS

The following set of recommendations arose from the findings of the study and aim to further increase links between a sustainable environment and a sustainable diet.

1. A systematic approach which goes beyond targeting the behaviour of the individual's meat consumption is required as it involves all stakeholders – government, public health bodies, non-governmental organizations (NGOs), food businesses, researchers, environmentalists and civil society – across a broad spectrum of sectors to develop programmes and policies that promote sustainable diets.

2. Educators and policy makers in the area of education, health and environment therefore have an important task in their endeavour to raise awareness. Campaigners need to address the motivational factors that are leading to the high consumption of meat and one influential underlying factor is the high value being attached to it as for example, the inclusion of various meat dishes on special occasions. Therefore, sustainable consumption campaigns need to address both social and cultural factors – factors which, as this study has shown, cannot be ignored.

#### 7. CONCLUSION

This research study has helped to form a clearer picture of the Maltese culture where meat consumption is concerned. As meat, compared to the past, is now included almost daily as part of the Maltese diet – one can even say that it has become a staple food. As the healthy Mediterranean Diet has clearly lost its popularity, different entities need to work together to promote traditional Maltese cuisine as part of a sustainable diet.

The researcher envisions an important link between the inclusion of ESD regarding meat consumption and the promotion of the national Maltese cuisine as it reflects our history, culture, folklore – our identity. Meat consumption and production have an environmental, economic, social and cultural impact and hopefully this study will trigger necessary action to be taken by the authorities concerned – this being the first step that will ultimately lead to the formulation of official healthy and sustainable dietary guidelines. If successful, not only the health of our nation and the environment will be addressed but we will also be contributing positively to the global environment.

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