

The Role of Culture in Environmental Sustainability

Burak Çetiner ¹ , Meltem Ince Yenilmez ^{2*} 

¹ Yasar University; burak.cetiner@yasar.edu.tr

² Izmir Democracy University; meltem.inceyenilmez@idu.edu.tr

* Correspondence: meltem.inceyenilmez@idu.edu.tr; Tel.: +90-232-260 1001

Keywords: sustainable environment, build environment, cultural sustainability, sustainable development

Abstract: Culture's importance is becoming a critical issue in our society. This is because such positions must be clearly defined for sustainable development to become a reality. The society appears to be having some difficulties right now. These factors include urbanization and climate change. The way these issues are solved will have a significant impact on society's future. This paper will examine literature to study the connection or relationship that exists between the built environment, sustainable development, and culture to describe the subject matter of this research. The importance of culture, the built environment, and sustainability will be highlighted in this section. Relevant and valid articles that demonstrate how culture is crucial in any sustainable environment or community will be the emphasis. The literature study explains how culture has a greater impact on societal development in both social and economic terms. Culture plays an important influence in long-term development. In other words, it is a critical component of the process. This is because it oversees assisting people in forming relationships and cultivating the proper attitude in the society in which they live. Sustainable development is an important idea and role in every culture and society. This is due to the fact that it has been discovered to have a good impact on every aspect of an embedded civilization. This paper will attempt to provide a comprehensive examination of culture and its contributions to environmental and sustainability issues. Culture will be considered as a fundamental component of any sustainable environment, as well as a component of the environmental, economic, and social implications of sustainable development.

1. Introduction

One topic that is always included in global discussion is environmental issues. Humans are beginning to see the need because environmental engagement will have to be practiced. Through such engagement, awareness about environment problems/challenges are created. Educational institutions are meant to impart knowledge to students on how much behavior can impact nature and change human behaviors to increase sustainability. Due to migration and globalization, there is now the need for cultures and nations to have an in-depth understanding about environmental engagement. The behavior of people in each society seems to be greatly influenced by their cultural values. This simply implies that environmental engagement differs amongst cultures. The problem is that very few studies have been carried out to investigate the cultural factors which characterize pro-environmental engagement. There are variations in types of pro-environmental behavior, levels of intensity and motiva-

tions. These will always vary across various cultures, political systems, economic development contexts, and surroundings (Gifford and Nilsson, 2014; Eom et al., 2016).

We are living in times which are characterized by unprecedented changes and growth. In the past 100 years, millions of lives have been transformed because of technological advancement which is especially true of people who live in industrialized countries. There is no doubt that scientific discoveries have played a huge role in such positive developments. Technology has changed many aspects of our lives. These could be in terms of how we travel from one location to another, obtain food, work, and much more. It has also impacted our lives in the aspect of recreating as well as maintenance of social relationships. People who live in countries that are experiencing industrialization tend to use technology in most parts of their lives. Everything we do on daily basis revolves around technology. These could be shopping, driving, and working. This development is new and majority of the comfort we are enjoying today could only be imagined about 100 years ago. However, development such as these usually have challenges or problems. For instance, technology seems to have some negative impacts on our natural environment. Since the initial stages of 21st century such effects are slowly becoming more obvious/ Technological advancement is costing the natural environment more than which can be imagined. It does not mean that the natural environment had not started experiencing some problems before the advent of technology in the 21st century. Looking back at the history of human activities, one thing has always been obvious throughout history where human activity has impacted surrounding environments (Ponting, 1991). However, there is no doubt that the severity of such effects has changed. For instance, damage caused by production as well as consumption which was once localized have now become global problems. During the end of the 20th century, studies showed that people in countries that are industrialized were living unsustainable lifestyles according to Hertsgaard (1999). Human activities caused pollution of land, air and water. This started threatening the existence of human species in most countries around the world.

This study is going to be investigating how culture has influenced environmental concerns. This will be organized as follows:

Section 1 - Clear and objective analysis of background of culture, behavior, and attitude

Section 2 - Examination of cultural sustainability

Section 3 - Environmental sustainability

Section 4 - Limitations of the study and recommendations to facilitate future research

2. Culture, Behavior and Attribute

According to anthropologists, a person's behavior can reveal many things that are hidden. As a matter of fact, through such behavior, it becomes possible for people to have an idea of the person's culture. The behavior of a person reflects his or her cultural values. When people come from cultural backgrounds that are different, they are bound to have varied views about life. They can react differently towards a particular event. This is how powerful culture can be. It has succeeded in molding and configuring the mindset of people in various parts of the world. Culture is one way of explaining how people tend to behave different towards the same thing. It shapes our mind and ways of thinking. When it comes how people think and act towards different

circumstances and situations, the power of culture can hardly be ignored. In the statement of Donald (2008), culture can influence the ways in which we behave and thinking to a great extent. Simply put, he tried to explain that cultural values and beliefs can determine how our brains function. This statement was supported by Donald (2008) who explained that brain structure can be influenced by language. She was also of the opinion that culture can influence how the human brain works. Furthermore, she explained that there are many elements which negatively affect the development of our social environment. These could be competitive stress, bonding and others. There are many ways that this can influence how the human brain works. However, they don't influence such process in a direct manner. When cultures are symbolized, our brains can become affected. This is mostly when the brain has been wired up in a certain way during development. Brain functioning is for the concept of deep enculturation. It is a process whereby complex hierarchies (parts of cognitive functions) are set up which will be responsible for the formation of new thoughts. Culture can have subsystems wired up inside the brain. The view of Donald shares some similarities with that of Geert Hofstede (Brown, 1995). According to Geert Hofstede, culture has to do with how the human mind has been programmed. Therefore, cultural differences exist since our minds have been programmed differently. Hofstede also pointed out that culture reflects how humans think. That are their perspectives towards a particular event or situation. When the attitude of people is studied or examined, it becomes possible to know more about their cultural values and beliefs. When Armstrong (1996), was trying to carry out an investigation of cultural values, he explained that a relationship exists between Individualism and Uncertainty Avoidance. This was the same as the description made by Hofstede on ethical perceptions and cultural dimensions. People tend to vary in their ethical perceptions. This depends on their cultural background though. A finding such as this is like the General Theory of Marketing Ethics by Hunt & Vitell (1986). According to this theory, a relationship exists between ethical problems and culture. It is the cultural background of people that enables them to form opinions on certain subject matters. For instance, while some people may see bribery as an immoral act, others may see nothing wrong with such behavior. Culture is an integral element of a social system. Its role is to promote the general wellbeing of every stakeholder in such system. The functionalist sees culture as the similar belief and values which people in such system or society share in common. Racelis (2009), was able to cite Edward Burnett, a British anthropologist who explained culture to be a combination of law, morals, art, customs, belief, knowledge, habits, and other factors which man has acquired as member of his society. In a system, culture represents ideal factors which can influence human behaviors or human events to a great extent. When individuals are faced with ethical dilemmas, their perceptions will be based on their values or beliefs.

According to these theories, how people think and perceive things are strongly affected by culture. In their study conducted on country-level data, Komatsu et al. (2019) examined whether individualistic countries would have a higher environmental impact compared to collectivistic countries. Their findings indicate that people living in individualist countries tend to have a lower level of anthropogenic perception (i.e., they don't believe that humans are primarily responsible for environmental problems), thus,

have a higher impact on the environment. The lack of self-control in individualistic countries caused by the conflict between personal benefits and environmental preservation also plays role in the environmental impact caused by these societies. The same can be said about their behaviors, beliefs, values, and attitudes. It should be noted that attitude doesn't just reflect how people behave towards one another. Instead, it can also influence their behavior towards environment or things. The fact that attitudes tend to vary from person to person is a fascinating aspect of human beings. For instance, people are unique in terms of the attitude they display towards events and things. Likes and dislikes is one major factor which has been discovered to significantly influence attitude. When people like something, such will be accepted. On the other hand, when such thing is not liked, there is a possibility of it being rejected. The mind influences our attitude greatly. For instance, behavior towards a situation can be influenced by our perspectives or views. Most of the time, people who expected to gain from a situation will accept something and vice versa (Kecmanovic, 1969).

Someone can decide to behave negatively or positively. It is important to stress the fact that the latter is much better since the former behavior can bring about negative emotions. Culture comprises of behaviors and attitudes. For change in attitude or behavior to be achieved, change in culture will be required. It is difficult to change cultural values. For this to happen, people are expected to re-evaluate their beliefs, attitudes, and values. When this has been achieved, that is when change in behavior can become a reality. Most the time, it is almost impossible to unlearn certain behaviors. Also, performing new behaviors is not an easy task. This doesn't imply that cultural practices can't be changed or modified. When people in the society are determined to make such change happen, it will be very possible. It is all about the willingness to change behaviors, attitude, values, and beliefs.

Environments are recognized based on instrument value (and not intrinsic value). Therefore, addressing environmental problems goes beyond creating of rules and laws which prohibit such environments/surroundings from being destroyed. Because such problems are traced to cultural practices, there is need for mindsets to be changed. Changing culture implies changing some aspects of the people's lives like value, and views. When this has been done, that is when their behavior or attitude towards nature or environment can change. New views regarding such environment will have to be introduced for people to adopt. This is how old views and beliefs are replaced. According to psychologists, maladaptive human behavior is the cause of most environmental problems (Maloney & Ward, 1973). This idea was supported by Oskamp (2000) who claimed that the major culprit for environmental problem is human behavior. According to him, the actions of humans have led to lots of problems which can hardly be corrected or addressed. These problems have affected the environment in various ways. Furthermore, he explained that for environmental problems to be solved effectively, humans' understanding needs to be changed. In other words, their attitude towards the environment should be changed.

Environmental attitude refers to beliefs and values that can affect the intentions of people within such surrounding (Schultz, Shriver, Tabanico, and Khazian, 2004). There are studies carried out by Hungerford, Hines, and Tomera, (1987); Wölfing, Kaiser, and Fuhler, (1999) which supported such idea about how the behavior of humans has been affected environmental attitude. In the opinion of Hines et al. (1986/1987), two forms of environmental attitude can be used in prediction of ecological behavior. These are attitude towards ecological behavior and attitude towards behavior. Behavior and atti-

tude are different factors, and the latter precedes the former. Simply put, the behavior of a person is influenced by his or her attitude. Attitude can be seen as your feelings towards something or someone. It is also a predisposition that is learned which responds in a manner that could be favorable or unfavorable (Eilam and Trop, 2012). Based on this explanation, attitude has an object. For instance, a person can develop attitude towards an object. This means that it is possible for attitude to be favorable or unfavorable. Also, it can be negative or positive. With regards to this research, environment is an object. The environment in this case is characterized by constant presence and has other sub-objects. Although these are individual sub-objects, they represent its totality. Therefore, our attitude towards the environment is expected to vary towards the various sub-objects. In the environment, there are separate or individual attitudes towards objects that are specific. These could be forest, animals, flower, Rocky Mountains, river and more. The environment happens to be an object that is experiential even though nobody can experience it. Instead, people experience its separate parts. The reason why attitude can be favorable or unfavorable is that it is characterized by feelings and cognitive components. The latter implies dispassionate facts as well as beliefs. It can be said that attitude is characterized by some components of evaluation. At emotional level, this is very deep and referred to as "affect". Therefore, it can be said that not all objects of attitude can lead to emotional response which include dislike and like. Bem (1970); Fishbein and Ajzen (1975), pointed out that evaluative judgment in the form of dislike and like are attitude. Evaluative beliefs on a given object is what this attitude is based on according to them. Environmental concern is what attitude toward the environment is called. A concern like this can be grouped as eco centric concern and anthropocentric concern.

Anthropocentric concern entails support for conservation policies as well as protection of the surrounding/environment. The motivation behind this is anthropocentric concern for the general wellbeing of humans versus supporting such policies which is based on concern for nature as well as the environment. It is backed up by the belief that the environment has value.

3. Culture and Sustainable Development

Just like environmental, social, and economic dimensions of sustainable development, economic sustainability is also very crucial. Therefore, it should be grouped as one of such dimensions which supports sustainability. There is a connection between sustainable development and culture. This is because culture explains how natural resources are appreciated by the society. Based on this, it plays a crucial role towards the economic advancement of the society. Every sustainable society focuses on 3 dimensions – economic viability, environmental responsibility, social equity, and justice. Although these are important, they are inadequate when it comes to supporting mankind's future and well-being according to Hawkes (2001). Packalén (2010) believes that sustainability should be regarded as a compass that leads societies in the right direction to achieve development instead of a to do list with boxes to be ticked off. He also states that communication and action between environmental, economic, and so-

cial dimension of sustainable development needs to be mediated by culture to have a basis to build on. Cultural heritage tends to play various roles like source of energy, social capital, employment, and cultural diversity. These are to pursue economic, environmental, and social problems of sustainability. It is possible for continuous cultural heritage to be achieved when it is used as tool or channel for economic development. This is because sustainable development is the result of the development which has been acquired (Gunay, 2008).

4. Cultural Sustainability

Human needs as well as interest in matters related to sustainable development are defined by culture. According to Cortese (2003), for a society that is more sustainable to be achieved, there is need for a cultural shift. In every society, culture is central. It doesn't only define the attitudes of people. Also, it defines their goals. It is the basis of our general behavior in the society. Culture tends to place culture at the center of a sustainable development process (Bosch, 2009).

Soini and Birkeland (2014) state that, the term "cultural sustainability" is used in different ways in various contexts, however, there is a lack of attempts in combining culture and sustainability systematically and analytically. Even today, culture is not analyzed as a concept by itself in context of sustainability, but it is rather analyzed as a part or sub concept of social sustainability (Cuthill, 2010). Soini and Dessein (2016) point at the importance of integration of culture into sustainability discourse, as they state that human's actions, behaviors, and accounts, which are culturally embedded, are what plays a crucial role in reaching sustainability objectives. According to Clammer (2013), culture is not only an essential component of sustainable development, but also a direct result of the development itself. Through cultural sustainability, various ways on how human lives can be improved are examined. The ways of setting an example for younger generations are also examined. If the society wants future generations to be self-dependent and meet needs of their own, it is important that resources exploitation is stopped. The way of life of any society is sharpened by its cultural value. Therefore, it can bring about change in attitudes which is required for sustainable development to be achieved. Culture plays a crucial in building of communities and lively cities where people live and work. It is also important when it comes to supporting economic and social wellbeing. According to Hawkes (2001), for a sustainable society to become a reality, there is need for a sustainable culture to exist. In other words, members of the community or society need to understand their cultural values. Cultural sustainability is all about ensuring that efforts are made for the preservation of cultural elements. These could be both tangible as well as intangible elements. This is the only way social, economic, and environmental sustainability can be achieved (NZMCH2006; Duxbury 2012). Now, there has been a shift with regards to how sustainability is being viewed in the world. These views don't have any effect on our environment, social wellbeing, and ecosystem. According to Hawkes (2001), the 3 dimensions of environmental balance, social inclusion, and economic growth do not reflect our global societies' dimensions. The world is presently facing environmental, social, and economic challenges. For peace to be achieved, there is need for a combination of elements or features like diversity, creativity, and knowledge. These

have a direct connection with human development and progress according to UCLG (2010). Two major components of every society are culture and values. However, the values of culture are dynamic since they evolve as the years are going by. First of all, there needs to be a shift in society's definition of sustainability. After that, there will be a shift in how the world defines sustainability (Fithian and Powell, 2009). In 2012, UNESCO director, Irina Bokova pointed out that culture is what defines us as humans. It provides solutions and answers to most of the problems we are encountering today. Due to this, there is a need for culture to be at the center of global sustainability (UNESCO, 2012a; Hayashi et al., 2013). Culture should not just be introduced but also integrated into economic, environmental, and social sustainability dimensions. This is the only way that sustainable development can be achieved (Scammon, 2012). With culture, there is a better support like connection of the 3 pillars of sustainability: environmental, economic, and social.

Economic sustainability includes the evaluation of maintenance and operational costs of the buildings in specific cultures. Also, environmental sustainability supports the continuous use of historic buildings, historic buildings etc. Environmental sustainability talks about historic buildings and how their demolition can be avoided. Through cultural dimension of sustainability, solid bridges are created with the other 3 development dimensions. It is very compatible with each dimension (UCLG, 2010). When cultural sustainability is applied, how natural capital is used via resource management will be minimized. There will be improved tangible social capital like infrastructure and public facilities. Also, economic capital will be strengthened through optimization of renewable resources. There is a need for energy and environmental performance to be improved in the global environment (Grierson, 2009). Cultural change is the only way this can be achieved.

According to Parodi (2011), culture is a condition and aim of sustainable development. Also, Hauser and Banse (2011), there is a strong relationship between sustainability and culture. Furthermore, Opoku and Fortune (2011), are of the opinion that for sustainability to be achieved, organizational leadership needs to be effective. Taylor (2009) pointed out that attempts to alter individual organizational leadership attitude as well as behavior for the achievement of sustainable organization without any attempt to change culture in such organizations won't yield any meaningful result. It is important for a society to be developed where the people's culture reflects sustainable behavior. According to most experts, the environment and culture function as one within a system. Therefore, trying to understand them separately is not possible. Culture is a driving force which brings about sustainability. It is a major factor that determines whether sustainability will be achieved or not (NZMCH, 2006; Fithian & Powell, 2009). When processes are culturally embedded, such can play a major role towards the achievement of sustainable development. When cultural issues or problems are looked at in sustainability, such can be grouped under social sustainability. Hawkes (2001), however, pointed out that there is a need for a sustainability model which integrates or interlinks 4 dimensions of social equity, cultural vitality, economic health, and environmental sustainability as shown in Figure 1 below.

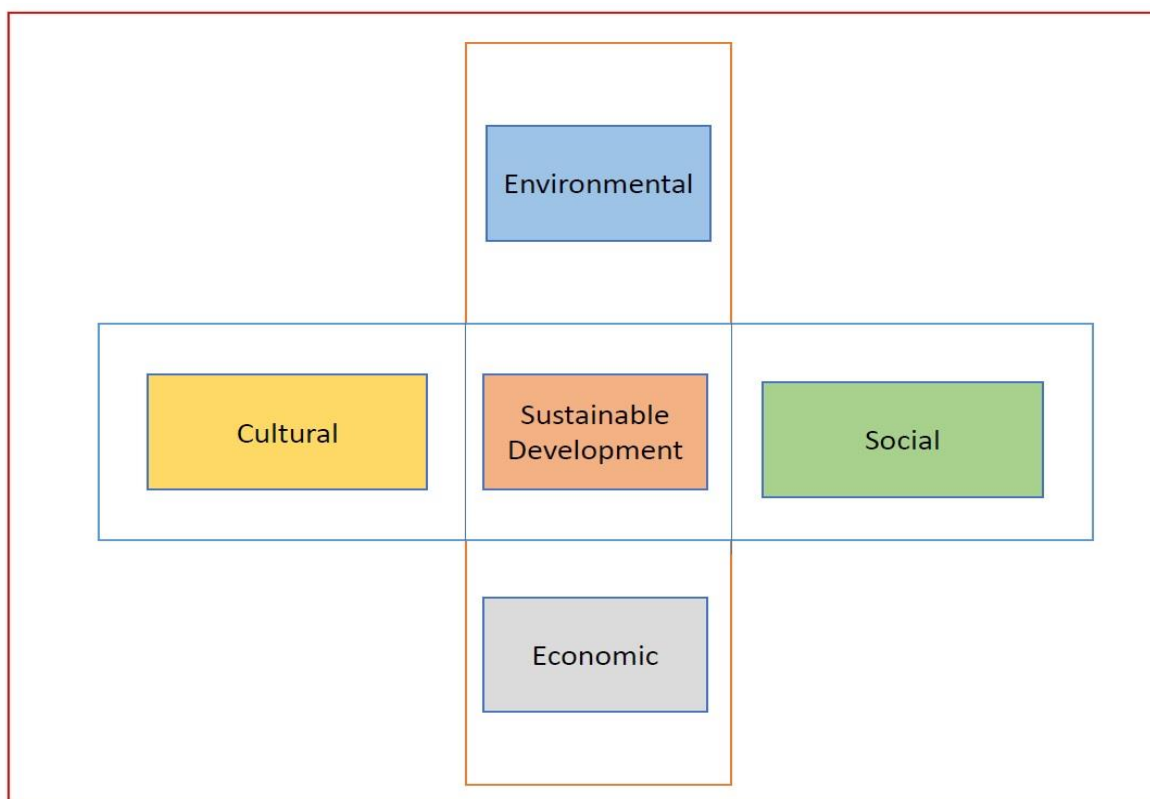


Figure 1. Proposed four dimensions model of sustainability (**Source:** Opoku, 2015)

This sustainability model (4-dimension) ensures that a lens is provided through which impacts of social, economic and environmental strategies are evaluated (Fithian and Powell, 2009). He believes that viewing an environment requires understanding the identities of its people. The other sustainability dimensions are supported by the remaining 3 sustainability dimensions (economic, environmental and social) via reusing and recycling of resources (NZMCH, 2006). Culture shouldn't be seen as a dimension which has been added to alongside social, economic and environmental objectives. This is because there are various factors which form the basis of how the environment is looked at. These could be epistemic frameworks, cosmologies, signifying systems, and people's identities (Fithian and Powell, 2009).

Sustainability's cultural dimension is becoming more present in discussions and deliberations that concern sustainable developments. However, there are arguments on how culture should be defined according to Dallaire and Colbert (2012). Through culture, people can act in a certain way (Nurse, 2006). It is defined as a combination of emotional, intellectual, material, and spiritual features of a social group or society (Hayashi et al., 2013). When it comes to decision making, culture can serve as an instrument. It encompasses diversity, knowledge, heritage and creativity. When it comes to human development, these values or elements are always present (UCLG, 2013). Whenever the implications of change in ecosystem is being addressed, cultural aspects will have to be integrated into such research. Culture is a sector which tends to embrace both tangible as well as intangible heritage, cultural infrastructures, cultural and creative industries. These have played their respective roles in the achievement of sustainable development. Such is evidenced in alleviation of poverty, environmental and social inclusion sustainability (UNESCO, 2012a).

Culture is characterized by dynamism. Therefore, it is constantly changing from one form to another. For sustainable development to become a reality, this is very crucial (Hawkes, 2001). Indigenous and local knowledge systems as well as environmental practices tend to provide important insight on how ecological challenges can be tackled. Other aspects it can help could be reducing the effects of climate change, reducing of land degradation, and prevention of biodiversity loss (UNESCO, 2012a). Through culture, economic growth can be fostered. It helps in ensuring that people live an improved life. There is better and improved adaptation to changes. According to Duxbury and Jeannotte (2010), culture is a way of life, capital and means through which sustainable values can be achieved. With culture, there is better insight about sustainability and how it can be achieved. When culture is integrated into strategies for sustainable development, there is advancement of inclusive as well as human-centered approach to development. Due to the transversal as well as cross-cutting nature of culture, it can affect every dimension of development according to UNESCO (2012a). Through employment and income generation, it can be linked to an economy. There are also social programs which handle poverty, civic engagement, and equal rights. This is how culture is linked to the society. Also, culture capital can be used in creating environmental responsibility and awareness UVLG (2013).

5. Environmental Sustainability

For environmental sustainability to be achieved, natural capital is required (Daly, 1973; 1974; World Bank, 1986; Pearce and Redclift, 1988; Pearce et al., 1990a; 1990b; Serageldin, 1993). They referred to economic input providers as sources while the absorbers of such outputs are known as wastes. The rate at which resources are harvested should be moderate. At sink site (resource absorption), waste emissions need to be controlled. In other words, the environment should have the capacity to absorb the amount of generated waste (Goodland and Daly, 1996).

Sustainable development is usually defined within the context of environmental sustainability. This misconception tends to explain that modern pattern or method of international development is causing more damage in the environment. Simply put, it is destroying natural environment. The problem with this view is that it hasn't considered other factors that are causing environmental degradation. According to Goodland and Daly (1996), there is a strong relationship between environmental sustainability and economic sustainability. In recent times, environmental sustainability has been brought by unprecedented attention based on how development theory tends to focus on issues related to poverty alleviation and economic underdevelopment in most developing countries. The response to unprecedented threats was late. However, it will be wrong to conclude that sustainable development is aimed at achieving environmental sustainability. Natural systems are being protected and this is for achieving social justice and economic vitality. For environmental sustainability to be achieved, there is need for social reforms and economic reforms to be carried out.

People in US started noticing that environmental problems caused by humans became very serious. The fact that there are lots of studies being carried out on environmental issues is an indication that people are beginning to become aware of such problems. The importance of protecting the environment can hardly be overem-

phasized. There is need for the environment to be improved on a continuous basis. Data gotten within 10 years revealed that many people agreed to the both short-term and long-term economic and social impacts of Exxon Valdez crash which caused spread of oil most of Alaska beaches and ocean according to Dunlap (1991). There have been causes related to environmental issues in many countries apart from US. Recently, researcher begin discover that environmental sustainability has gained lots of support (Dunlap, Gallup, and Gallup, 1993). One of the studies carried out by Dunlap & Gallup organization, conducted a survey amongst 1000 individuals from about 24 countries. These were broken down into industrialized nations and developing nations.

The industrialized nations were Switzerland, Portugal, Great Britain, Netherlands, USA, Ireland, Canada, Norway, Finland, Germany, and Denmark. Developing countries were Nigeria, Turkey, India, Hungary, Russia, Poland, Philippines, Korea, Chile, Uruguay, Brazil and Mexico. In the first question, people were asked the problem that their nations were facing. At such point, respondents couldn't think of environmental issues. However, environmental issues were mostly identified in about 16 countries. The only problem that was mentioned more often was economic issues. When quizzed about the environmental problems they were facing, over half of the respondents in 21 countries (apart from Poland, Switzerland, and Turkey) stated "fair amount" or "great deal". The problem of economic growth and environmental protection has been the subject for debates over the years. Just as shown in the survey above, people are willing to sacrifice more for the protection of their environments. The question is whether people living in other countries will be willing to do the same. People in US are comfortable financially when compared to people living in other countries. However, the findings from cross-cultural results revealed that most people in 17 of these countries were willing to pay for environmental protection. Even people in Mexico, Chile and India were willing. In 21 countries, over 50% of the people were in support of environmental protection instead of economic growth. The statistics of people who favored economic growth in the remaining 3 countries were Nigeria (30%), Turkey (43%), and India (43%) according to Dunlap, Gallup, & Gallup (1992). These results only show that even in countries that are poor, there is great concern for environmental protection.

6. Conclusion

There is an obvious relationship between culture and environment. This could range from professions, industries to agriculture. In the Caribbean or Japan where fishing is a source of livelihood, problems related to water pollution will be taken seriously as compared to desert-covered or landlocked countries. In places where coal mining is being relied upon, initiatives related to green energy will be opposed.

A country's economic situation can also influence solutions which people will discover. Interestingly, this is one advantage that poor countries tend to have. Instead of depending on technology, they develop their own solutions. They don't depend on corporations, government or even wealth for problems to be handled. Poor communities have mastered the art of fending for themselves over the years.

These are the factors (and others) which can determine how various cultures will respond to challenges they are facing due to human interference within the environment and climate change. Technological advancement, closeness to areas that are highly populated, tradition, cultural values, level of education, influence of media and many others are factors that can determine the attitudes of people. Therefore, everyone is a victim of one environmental problem or another. Industrial revolution brought about use of technologies which have caused lots of environmental issues. If these issues are not addressed through some changes, humans and non-humans may go into extinct. Psychology has a major role to play when it comes to living a sustainable lifestyle.

References

1. Armstrong, W. R. (1996). The Relationship between Culture and Perception of Ethical Problems in International Marketing, *Journal of Business Ethics*, 15(11): 1199-1208
2. Bem, D.J. (1970). *Beliefs, attitudes and human affairs*. Belmont, California: Brooks/Cole.
3. Bosch, C. (2009). Agenda 21 for Culture: An Agreement by Cities and Local Governments for Cultural Development. Available at SSRN: <https://ssrn.com/abstract=2056382> or <http://dx.doi.org/10.2139/ssrn.2056382>
4. Brown, A. (1995). *Organisational Culture*, London: Pitman Publishing
5. Brown, L., Flavin, C., French, H. (2001). *State of the world: 2001*. New York: Norton. Dunlap, R. E. (1991). Trends in public opinion toward environmental issues: 1965-1990. *Society and Natural Resources*, 4, 285-312.
6. Clammer, J. (2013). *Culture, development and social theory: towards an integrated social development*. Zed Books Ltd.
7. Cortese, A.D. (2003). The critical role of higher education in creating a sustainable future. *Plan High Educ*, 31(3):15-22.
8. Cuthill, M. (2010). Strengthening the 'social' in sustainable development: Developing a conceptual framework for social sustainability in a rapid urban growth region in Australia. *Sustainable development*, 18(6), 362-373.
9. Daly, H. E (1973). *Towards a Steady State Economy*. San Francisco: Freeman.
10. Daly, H. E. (1974). The Economics of the Steady State. *American Economic Review*, 64(2): 15-21.
11. Donald, M. (2008). How culture and brain mechanisms interact in decision making. In C. Engel and W. Singer, *Better than conscious? Decision-making, the Human Mind, and Implications for institutions*. Cambridge, MA: The MIT Press 2008, 191-225.
12. Dunlap, R. E., Gallup, G., Gallup, A. (1993). Global environmental concern: Results from an international public opinion survey. *Environment*, 35, 33-39.
13. Duxbury, N., Cullen, C., Pascual, J. et al. (2012) Cities, culture and sustainable development. In: H.K. Anheier, Y.R. Isar and M. Hoelscher (eds.), *Cultural Policy and Governance in a New Metropolitan Age*. The Cultures and Globalization Series, Vol. 5. London: Sage.

14. Duxbury, N., Jeannotte, M.S. (2010) Culture, sustainability and communities: exploring the myths, Oficina do CES Nr. 353, Universidade de Coimbra. A paper presented at the 6th international conference on cultural policy research, Jyväskylä, Finland, 24–27 Aug 2010
15. Economic and social council (ECOSOC 2013), UCLG Committee on culture world secretariat
16. Eilam, E., Trop, T. (2012). Environmental Attitudes and Environmental Behavior—which is the Horse and which is the Cart? School of Education, Institute of Sustainability and Innovation (ISI), Victoria University.
17. Eom, K., Kim, H. S., Sherman, D. K., Ishii, K. (2016). Cultural variability in the link between environmental concern and support for environmental action. *Psychol. Sci.* 27, 1331–1339.
18. Fishbein, M., Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Reading, Mass.: Addison Publishing Company: Gale Encyclopedia of Science.
19. Fithian C. and Powell A (2009) Cultural aspects of sustainable development. Student paper for sustainable design seminar/studio, fall 2009, seminar in sustainable architecture, University of Texas School of Architecture.
20. Gifford, R., and Nilsson, A. (2014). Personal and social factors that influence pro-environmental concern and behaviour: a review. *Int. J. Psychol.* 49, 141–157.
21. Goodland, R. and Daly, H. (1996). Environmental sustainability: Universal and non-negotiable. *Ecol. Appl.*, 6: 1002-1017.
22. Grierson D (2009) Towards a sustainable built environment. *CIC Start Online Innovation Rev*, 1:70–77
23. Gunay, Z. (2008). Neoliberal urbanism and cultural heritage. 44th ISOCARP congress, 2008
24. Hauser, R. and Banse, G. (2011) Culture and culturality: approaching a multi-faceted concept. In Parodi, O., Ayestaran, I. Banse, G.B., *Sustainable Development- Relationships to Culture, Knowledge and Ethics*, KIT Scientific Publishing, Karlsruhe.
25. Hawkes, J. (2001). *The fourth pillar of sustainability: culture’s essential role in public planning*. Common Ground Press, Melbourne
26. Hayashi N, Boccardi G, Al Hassan N et al (2013) Culture in the post-2015 sustainable
27. Hertsgaard, M. (1999). *Earth odyssey: Around the world in search of our environmental future*. New York: Broadway
28. Hines, J. M., Hungerford, H. R. and Tomera, A. N. (1987). Analysis and synthesis of research on responsible environmental behavior: A meta-analysis. *Journal of Environmental Education*, 18(2), 1-8.
29. Hunt, S.D. and Vitell, S.J. (1986). The general theory of marketing ethics’. *Journal of Macromarketing*, 8(1): 5–16.
30. Kaiser, F. G., Wölfling, S. and Fuhler, U. (1999). Environmental attitude and ecological behavior. *Journal of Environmental Psychology*, 19, 1-19
31. Kecmanovic, D. (1969). The paranoid attitude as the common form of social behavior. *Sociologija*, 11(4), 573-585.
32. Komatsu, H., Rappleye, J., & Silova, I. (2019). Culture and the Independent Self: Obstacles to environmental sustainability? *Anthropocene*, 26, 100198.

33. Maloney, M. P. and Ward, M. P. (1973). Ecology: Let's hear it from the people – An objective scale for measurement of ecological attitudes and knowledge. *American Psychologist*, 28, 583-586.
34. Nurse, K. (2006). Culture as the fourth pillar of sustainable development. Prepared for metropolitan age. The cultures and globalization series, vol 5. Sage Publications Ltd, London,
35. NZMCH (2006) Cultural well-being and local government report 1: definition and context of cultural well-being. New Zealand Ministry for Culture and Heritage, Wellington of United Cities and Local Governments (UCLG), Barcelona
36. Opoku A, Fortune C (2011) The implementation of sustainable practices through leadership in construction organizations In: Egbu C, Lou ECW (eds) Proceedings 27th annual ARCOM
37. Oskamp, S. (2000). A sustainable future for humanity? How can psychology help? *American Psychologist*, 55, 496-508.
38. Packalén, S. (2010). Culture and sustainability. *Corporate social responsibility and environmental management*, 17(2), 118-121.
39. Parodi O (2011) Three steps towards a culture of sustainability. In: Parodi O, Ayestaran I, Banse G (eds) Sustainable development-relationships to culture, knowledge and ethics. KIT Scientific Publishing, Karlsruhe, pp 76–92
40. Pearce, D. W., Barbier, E. and Markandya, A. (1990a). *Sustainable Development: Economics and Environment in the Third World*. Aldershot: Elgar.
41. Pearce, D. W., Markandya, A. and Barbier, A. (1990b). *Blueprint for a Green Economy*. London: Earthscan.
42. Ponting C. (1991). *A Green History of the World*. 432 pp. London: Penguin.
43. pp 73–86
44. Racelis, A. R. (2009). Relationship between Employee Perceptions of Corporate Ethics and Organizational Culture: An Exploratory Study. College of Business Administration, University of the Philippines, Philippines.
45. Scammon, D. (2012) Sustainability and culture: how do they work together? LCC 480 senior
46. Schultz, P. W., Shriver, C., Tabanico, J. J. and Khazian, A. M. (2004). Implicit connections with nature. *Journal of Environmental Psychology*, 24, 31-42. seminars, 30 April 2012.
47. Serageldin, I. (1993). *Developmental Partners: Aid and Cooperation in the 1990's*. Stockholm: SIDA.
48. Soini, K. and Birkeland, I. (2014). Exploring the scientific discourse on cultural sustainability. *Geoforum*, 51, 213-223.
49. Soini, K. and Dessein, J. (2016). Culture-sustainability relation: Towards a conceptual framework. *Sustainability*, 8(2), 167.
50. Taylor, C. (2009) Building cultures for sustainability. *Oxford Leadership Journal*, 1(1):1–3
51. UCLG (2010) Culture: fourth pillar of sustainable. UCLG policy statement, UCLG Committee on culture and world secretariat policy statement for Mexico City, United Cities and Local Governments (UCLG), Barcelona, 16 Sept 2010
52. UCLG (2013) The role of culture in sustainable development to be explicitly recognised. UN

53. UNESCO (2012a) Culture: a driver and an enabler of sustainable development. UN system task team on the post-2015 development agenda, The United Nations Scientific, Educational and Cultural Organization (UNESCO). http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/post2015/pdf/Think_Piece_Culture.pdf.
54. UNESCO (2012b) The future we want: the role of culture in sustainable development. The United Nations Scientific, Educational and Cultural Organization (UNESCO). <http://www.unesco.org/new/en/rio-20/culture-for-all> can acknowledge any support given which is not covered by the author contribution or funding sections. This may include administrative and technical support, or donations in kind (e.g., materials used for experiments).



© 2021 by the authors. Licensee UAIC, Iasi, Romania. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY-NC-ND) license (<https://creativecommons.org/licenses/by-nc-nd/4.0>).