

## **TOURISM PRODUCT DEVELOPMENT, A STRATEGY OF MANAGING PLASTIC SOLID WASTE IN DANDORA, NAIROBI, KENYA**

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**ABSTRACT:** *Contemporary art tourism is new in Kenya but it is considered as old as tourism itself because for centuries many societies had already given much appreciation for the arts and culture. On the other hand, recycling of plastic materials is being encouraged because of the negative effects plastic products do have on the environment all over the world. Some of the nations have recognized and taken the initiative so as to transform the menace into lucrative products. The core objective of the study is to find out whether contemporary art as a form of sustainable new tourism product will help in managing plastic waste at Dandora dumpsite in Nairobi, Kenya. The study further looked on the importance of new tourism product development to the country and also the importance of innovation in establishing tourism products in Kenya. The study adopted an action research design. A semi structured questionnaire and interviews were used to collect data from representative stakeholders. Data was analyzed using statistical package for the social sciences (SPSS). The results indicated that plastic waste has affected the lives of so many negatively and recommends sustainable measures to deal with it such as the use of contemporary art by recycling the plastic waste.*

**KEYWORDS:** Sustainable Tourism, Contemporary Art, Plastic Waste Management, New Tourism Product, Innovation

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## **INTRODUCTION**

Art is described as a diverse range of human activities and the products of those activities, but in this case it refers to the visual or contemporary arts which cover the creation of images or objects in fields, including painting, sculpture, printmaking, photography and other visual media. Art is also considered something that stimulates an individual's thoughts, emotions, beliefs or ideas through the senses. According to Holloway *et al.*, 2009, it is seen that there is a growing recognition today that art has a role to play in the tourism industry, not just through museums, galleries and arts events organized to attract the tourists but in the everyday surroundings in which visitors find themselves. Ostensibly, street art is designed to heighten the visual appeal of a town for its residents, but once again such embellishment will add to the attraction of the destination for the visitors.

In Taiwan nearly 180000 tons of used plastic were collected and turned into raw materials worth \$140 million, which cut down garbage disposal costs. Recycled plastic can be made into many products such as garments, flower pots, wigs and zippers. Taiwan considers this not only protecting the environment but also making money. It is further said that in the near future

houses built from recycled plastic bottles will mushroom across the island after “Eco-ark” the world’s first such building which is now a huge tourist attraction. Currently there is the building of a luxury boutique hotel made from plastic (Agence France-Presse, 2010). This paper brings out the need of connecting the action of recycling with tourism. This action will lead to the betterment of the tourism industry due to the new products in the industry and on the same time it will improve the environment situation that has been destroyed with plastic, this is because people out there will be encouraged because of the positivity that recycle tourism will bring to the country.

## LITERATURE REVIEW

According to Amitabh Shukla (2009), innovation is all about exploiting new ideas leading to the creation of a new product, process or service. It is not just the invention of a new idea that is important but it is actually “bringing it to market”, putting into practice and exploiting it in a manner that leads to new products, service or systems that add value or improve quality. Innovation also means exploiting new technology and employing out-of-the box thinking to generate new value and to bring about significant changes in society. Importance of innovation is increasing, and increasing significantly. In the current day economic scenario, innovativeness has become a major factor in influencing strategic planning. It has been acknowledged that innovation leads to wealth creation. Even though efficiency is essential for business success in the long run, it cannot sustain growth.

Management expert (Drucker 1985) said that if an established organization which in this age necessitating innovation, is not able to innovate, it faces decline and extinction. Research has also indicated that competition combined with strong demand is a major driver of innovation. Today, we need innovators more than any time before considering that there is the need for sustainability (ecologically, socially and economically) in the products developed. Every organization and business is feeling the impact of globalization, migration, technological, knowledge revolutions and climate change issues. Innovation will bring added value and widen the employment base. Innovation is imperative if the quality of life in these trying circumstances is to improve. Innovation will make the world a better place for the younger generation.

The great Soviet Encyclopedia (1979) explains how art can be an innovative product, spatial arts is the concept uniting different forms of art whose works exist in space, do not change and develop in time, and are perceived visually. Work of the plastic arts always has an objective character. The plastic arts are subdivided into the representational and non-representational arts. To the first category, it includes; painting, sculpture, graphics and photography which reproduce visually perceived reality with varying degrees of sensual accuracy. The non-representational plastic arts include architecture, decorative applied art and artistic design. The plastic art differ from other kinds of artistic expressions in the lack of temporal development of the image. The form does not change in time nor does it have an ongoing quality as it does for example in music. In addition, works of the plastic arts are perceived by sight and in some cases by touch as well (sculptures and decorative applied art). Complete appreciation and understanding of architectural images and some monumental paintings and sculptures require motor perception, which takes a

certain length of time. However in such cases the temporal element is only subjective; the work itself remains unchanged.

Moreover as a type of artistic activity, the plastic arts are among the phenomena of social consciousness. At all stages of man's historical development they have occupied an important place in the spiritual assimilation of reality in ideological life and in the social struggle, however many of their characteristics ally them with the world of material objects created by man as his cultural milieu. Man's spiritual capacities were developed by the very act reworking natural materials and giving them forms that correspond to social needs by the creation in actual practice of "a change in the world" of objects, the production of works that are foreign to nature and that stand opposed to nature because they are man-made. The growth of human spiritual capacities included "the eye" which serves the beauty of form (K.Marx 1956).

Jeanne Mozier (2005) has shown that, art is a major contributor to the nearly \$40 million tourism industry in Berkeley Springs with a million dollar return of its own. Actually, the town has reaped national attention for its art town status; in the past decade, Berkeley Springs has been included in all four editions of "America's 100 Best Art towns" by John Villani, one of fewer than a dozen locations so honored, and it has been repeatedly voted among the top art destinations in the country by the "American Style magazine." Indeed the synergy between art and art tourism based on spas has forged a close working relationship between the Morgan Arts Council as the lead organization in the arts. One of the accomplishments of the Morgan Arts Council (MAC) is the transformation of an abandoned century- old cold storage building in the centre of town into the 40,000 square foot ice house art center. Art entrepreneurs are just as busy; there are seven galleries and shops selling more than \$ 800,000 of local, regional and national art annually.

According to appropedia user Richard.F *et al* (2011) plastic bottles packed tight with plastic trash until they are as hard as bricks have been used in several places including the Easter Island and Chile. Ecoladrillo has been used mostly for commercial centers such as schools. 'Fandacion de la paz' is currently working on developing a commercial version of Ecoladrillo, called an eco-panel which they hope to market and sell and further raise awareness. Elsewhere in Tapei, Taiwan the Ecoark was constructed using 1.5 million recycled plastic bottles to raise awareness of recycling and environmental issues. The pavilion, dubbed the ecoark includes an amphitheatre, museum space and a screen of falling water collected during rainy periods for air conditioning. The clear plastic containers in the wall allow natural light to flood the cavernous interior (Huang, 2010).

In South Africa, plastic bags are often disregarded, seen as disposable throw-away items in our modern day society which end up in landfill or polluting the landscape. Yet they are often made in beautiful and bright colours which can be chosen to celebrate the plastic bag by lovingly hand-knitting and stitching the discarded bugs, creating contemporary art works as well as functional handbags, a chair( inkuku), flowers, Dacca boots, shoes, mandalas, dresses, bangles and accessories( Kate Ward 2010).

Elsewhere according to Africadget.com, a website devoted to African ingenuity, identified that tourists regularly leave plastic water bottles on Kenya's beaches therefore one man decided to do something about it in the form of a boat. Known as Kenya's oldest town, Lamu is the largest town on Lamu Island, part of the Lamu archipelago. It happens that it has become the site of lots of plastic trash, thanks to irresponsible tourists. But one man decided to turn all that waste into something quite useful for this port town, a boat. This young man wakes up early in the morning and goes to the beach to collect plastic bottles that are either left by the tourists or washed ashore from the sea. Using boiled tar, he seals the gaps with used slippers also collected from the beach. Additionally, according to Omenda (2012), in bid to conserve the environment granny women in Kibera have found creative ways of recycling plastic paper bags into environmental friendly products. Their interest in the recycling industry was sparked by the realization of easily accessible plastic paper bags that were fast becoming an environmental hazard and a nuisance. Their level of creativity cannot be underestimated by looking at their faces. Though they are aged their collective effort has seen them make unique handbags, doormats, clutch bags, stools and dresses from plastic paper bags. The process of using these plastic bags may include the following; first and most the process of making these plastic paper bag items starts with collecting papers that are still in good condition. They are gathered from households and dumpsites with the help of a few youth hence creating employment for these youths.

Thereafter the papers are then washed with soap to remove germs and afterwards it is hanged to dry for ten to twenty minutes, then they are cut into shapes of strings. The strings are then sewn together into shapes blending different colours to enhance its uniqueness, for instance door mats are made into colours and shapes of animals like zebras and cheetahs. And finally depending on the product being made Buckles from old clothes and curtains are used as handles to support the bag and make it look stylish. Broken plastic containers and cans are turned into seating stools by decorating them with these papers. Due to the lack of enough publicity of this group among the locals, tourists are their main customers especially from Italy and they have also exported some of their products to the COMESA countries especially Tanzania and Zimbabwe. On a good order they earn between ksh 2000 to ksh 3000 per person. Tourists offer good profits by buying the bag for ksh 1800 to ksh 2000 each. Locally the handbags are sold for ksh 500. "The success of the Muslim women group can be seen from the documented photographs and the archives kept in their houses," said Kadar Abubakar, a member of the group. They have further ventured in artistic work by making picture frames, decorations and drawings whereby we melt old plastics, smear the hot liquid on the fibre board and stick things like beans in a creative way to make it attractive. "Sometimes we draw and sell the pictures. The project has also unleashed their creative and artistic potential, some of us never knew we could draw or come up with creative products. We may be old but we are also creative," she added. According to a report released by the government in February 2005, the United Nations Environment Programme (UNEP) and the Kenya institute for public policy research and analysis evaluated the state of waste management in the country focusing on plastic bag pollution. It recommended for the development of programmes to encourage people not to litter, but to recycle or use alternative bags for their shopping needs.



### Study Area

Dandora is an eastern suburb in Nairobi, Kenya. It is part of the Embakasi division. Surrounding neighborhoods include Kariobangi, Baba Dogo, Gitaremarigo and Korogocho. Dandora is divided into five phases. Dandora was established in 1977 with partial financing by the World Bank in order to offer higher standards of housing. However, the estate has turned into high-density slum with high unemployment and to add on that, Nairobi's principal dumping site is situated in Dandora, probably causing health problems for local residents.



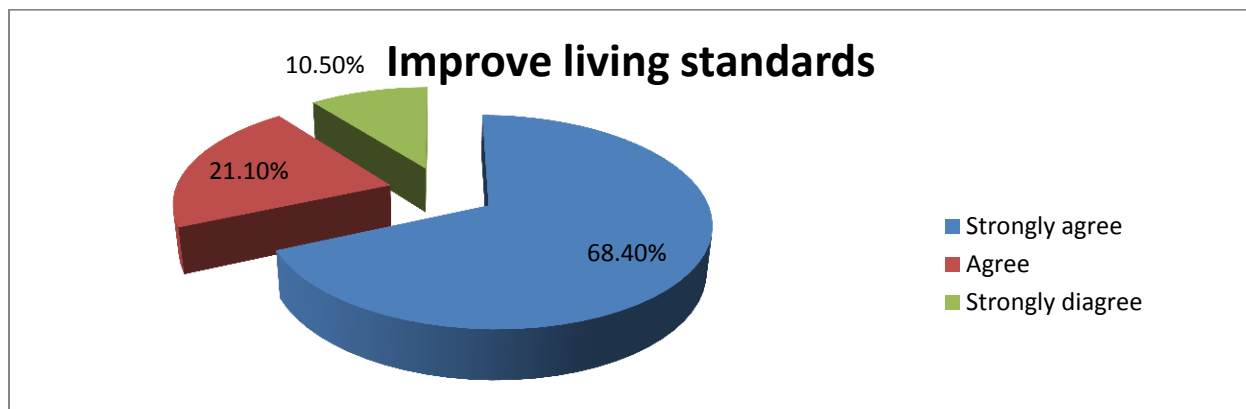
**Figure 1: Current picture of Dandora dumpsite.**

### METHODOLOGY

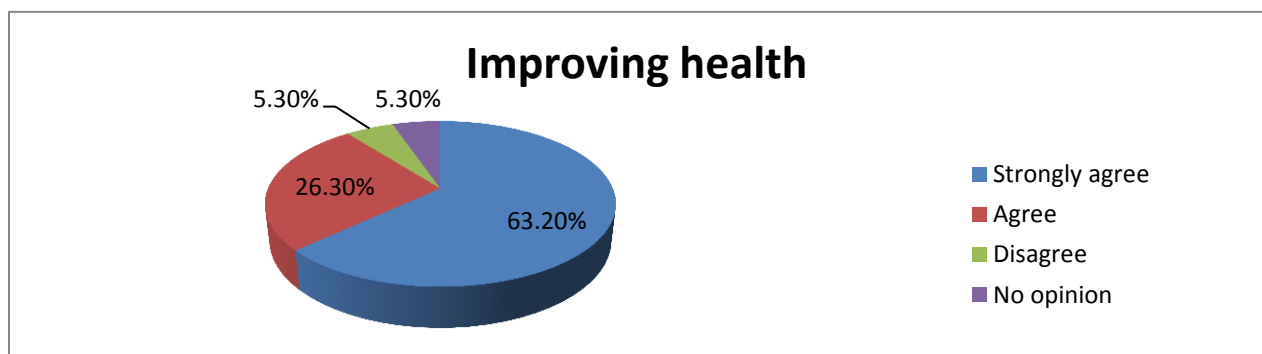
In this study respondents were selected using stratified random sampling whereby they were categorized into different stratas including residents, tourists and representative stakeholders. Stratified random sampling involves dividing the population into homogenous sub groups and then taking a simple random sample in each subgroup (Kombo and Tramp, 2006). Data was collected from both primary and secondary sources. Primary data was collected through questionnaires, observations and interviews. Whereby the questionnaires will involve the structured and open-ended format. Secondary data was obtained from related books, newspapers, tourism related magazines and research papers. The respondents include; 20 residents, 20 tourists both local and international giving a total of 40 respondents. Interview was done to representatives from KTDC (Kenya Tourist development Corporation) from NEMA (Natural Environment Management Authority), Nairobi city council and Watatu gallery. The presentation of the results is per the study objectives. In order to critically define, describe and understand this objective, the following specific objectives were studied: To evaluate the importance of innovation in establishing new tourism products in Kenya, to determine the importance of the product development to the country and last but not least to investigate whether art tourism product developed will help in managing solid waste (plastic paper bags) at Dandora in Nairobi.

## RESEARCH FINDINGS

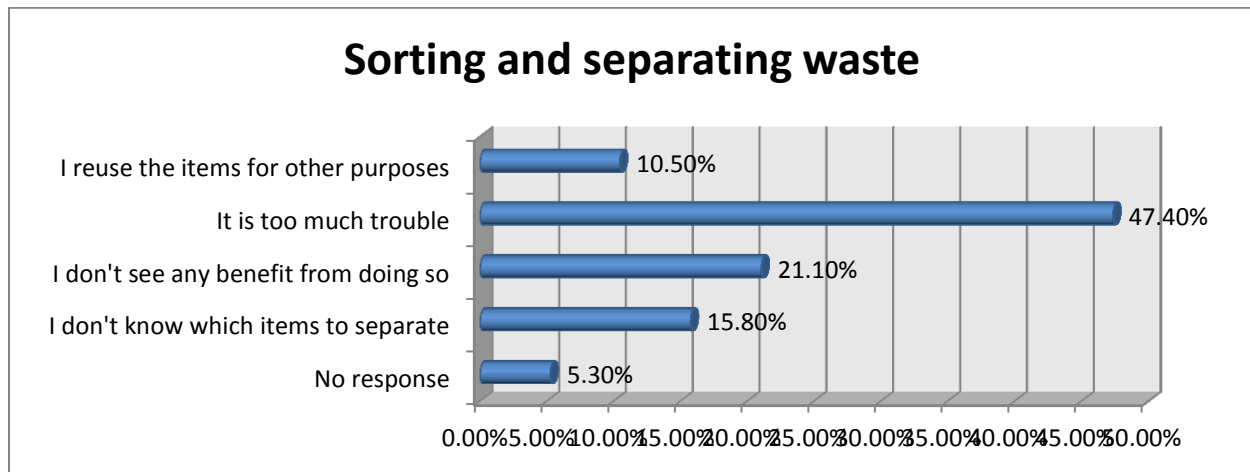
According to the research done, it was evident that the residents of Dandora region (68.40%) and especially for those who participate in visual arts agreed to and welcomed the idea that creative art by the use of plastic materials can and to some extent it has helped in improving their living standards. So far economic improvement has been felt because it has led job creation but for the environmental and social improvement are yet to be felt because the dumpsite keeps on increasing each day hence difficult for the few people who believe in recycling recyclables. Therefore because of the situation, the research collected was able to portray mixed reactions on the contribution of art to their lives. Extensively, 63.20% of the residents thought that if this kind of art using plastic materials is well managed and supported by the government it will definitely come to the assistance in improving the health standards within the region. Unfortunately or fortunately it was recorded that 42.10% of the residents would sort and separate recyclables if it will lead to job creation and on the other side 31.60% would sort and separate recyclables if at all they received another benefit apart from environmental benefit.



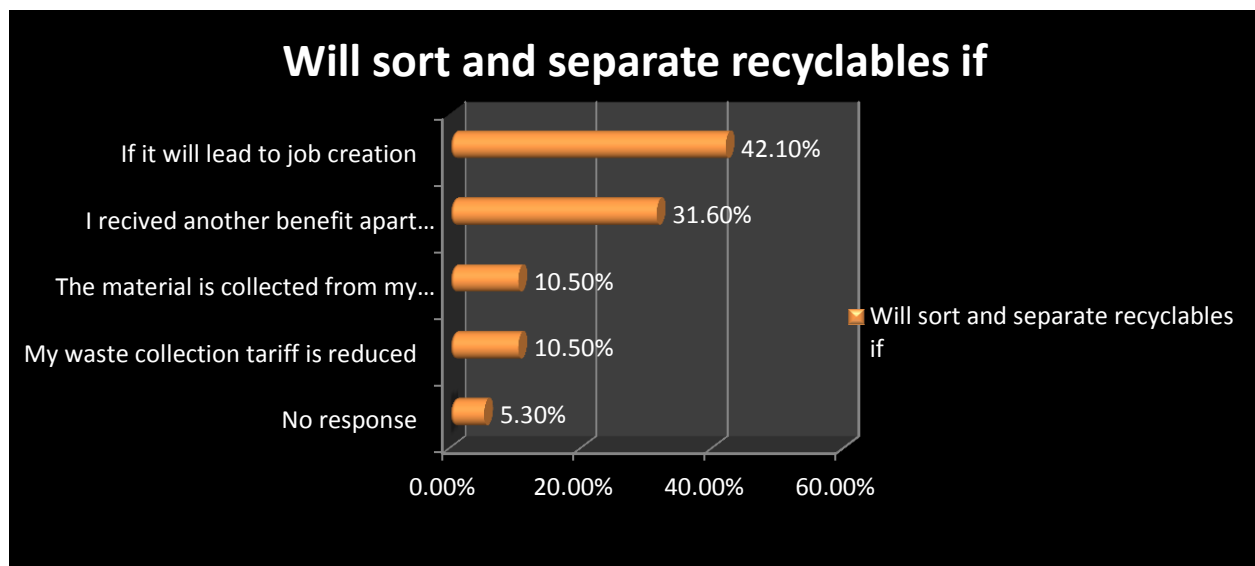
**Figure 2: Representation of those who think contemporary art using plastic will indeed help in improving living standards in the region.**



**Figure 3: Representation of those who think contemporary art using plastic will indeed help in improving health in the region.**



**Figure 4: Resident's opinion about sorting and separating waste**



**Figure 5: Residents would sort and separate recyclables for the above reasons.**

The interesting thing about it all is that the research done on the tourists who represented all the continents in the world, the highest number of 65% were representatives from Americans and they showed that 100% would buy and support products that are made from recyclables. Infact most of them are already buying and visiting some of the few places in the country which include: Zero waste women group and Koplwa centre in Kibera, Leo Toto women's group in Dandora. The market( tourists)believe that apart from them gaining, the country will benefit more because it will have created jobs to the country, kept the environment clean by resuming its beauty which the plastic has distorted therefore making it a sustainable product and the obvious one is that tourism revenue will increase.



## Examples of lucrative products made from plastic bag waste



Figure 6: Dacca Boots (from multiple layers of the plastic fused together)



Figure7: Inkuku (South African traditional chair) by Ryan Frank



Figure 8: A white trash/repurposed plastic bag dress



Figure 9: A picture of Taa (leader of zero waste women group) and i with some of the artistic products made from plastic bags.



**Importance of New Tourism Product Development**

Product development improves the profitability of tourism businesses by increasing the number of products and services available for tourists as well as the number of visits, length of stay and spending by individual visitors. According to Raija Komppula, 2001, emphasis that although product development is a prerequisite for satisfying tourists needs and changing demands as well as insuring the profitability of the industry, new product development in tourism companies has been a nearly ignored theme in tourism marketing literature. There has been very little interest in the new product development processes. When it comes to art tourism, Britain is becoming more aware of the importance of art and the way in which it can serve the interests of the tourist industry. Both museums and art galleries are visited by huge numbers of tourists each year. In Britain alone, 54.6 million people visited museums and art galleries in 2006. Many are established primarily to serve the needs of the local inhabitants— at least initially- but others have quickly gained international reputation. Examples of the latter include the British museums in London, the Ashmolean museum in Oxford, the Louvre in Paris, the Smithsonian museum in Washington DC and museum of modern Art (MOMA) in New York.

Kenya as a tourist destination has a lot to offer but some of the products have really dominated while some little interest is given to them. According to the research collected, it can be seen that coastal & beach tourism and wildlife are the dominant tourism products, others such as sport tourism, cultural tourism and business and conference tourism are slowly catching up with the pace but some such as art tourism is actually there but it cannot really be felt because it is underdeveloped or rather poorly managed. Thereafter it was observed that 94.7% of the residents acknowledge that there is the need of introducing new tourism products whereby in these products the locals' decisions and creativity considered this is because 63.2% see that the government is currently the sector that is benefiting the most from tourism because of corruption. Additionally they think it wise that if art is fully recognized by the country as a form of tourism, the locals in form of individual artist will be able to get their share because they will be the ones preparing the products in this case the artistic pieces to the market. Mechanisms that the locals think should be put in place when introducing this product include; sensitization and training of the locals, should be involved in decision making, proper management of the resources, support of the locals creativity, reduce taxes from the art products and finally development of the local art industry. Meanwhile on the other hand 100% of the tourists see the need of introducing new products because first of all Kenya as a country has a lot to offer, secondly they see the need of diversification and last but not least Kenyans themselves are truly gifted and creative people. Art in itself it is not totally a new product in Kenya, explains Dede of Watatu gallery during the interview. It is only not fully marketed and most of the times not managed well, but apart from that the few art galleries, exhibitions and museums are imposed on high taxes. In Kenya when people think about art they only think of selling and buying of this art, but for it to be considered as a product there should be the practice of installation art (participative art) whereby the tourist can still be part of those who enjoy and learn art products without necessarily buying the art pieces. This type of installation art is happening in Malaysia, France, America and other countries that take part in art and consider it as huge tourist attraction because it attracts so many tourists hence leading to the generation of income in the tourism sector. In the case of this study is considered a new tourism product because plastic material is being used to create artistic products and this has not been happening for some time until some creative locals took the

initiative to use plastic papers which for sure has become a disturbing image in the country and change it into gold of artistic products explains Taa (an elderly woman) of Zero waste women group during the interview.

### **Importance of innovation in establishing new tourism products**

According to Korres, George M (2007), creativity encourages innovation and innovation plays a vital role in the development of new business concepts, processes and products. Innovation drives growth and opportunity in new markets and breathes life into a mature industry. In today's fast paced business environment, creativity and innovation is a prerequisite for success and also for survival. Therefore this is why creativity and innovation are now moving to the top of the agenda for organizations and destinations around the world. For long the importance of innovation was underestimated in service and tourism activities. Successful innovations as for instance innovation that is also profitable to the tourism firm in a competitive market hence must increase the value of the whole tourism product. Additionally, Suiith (2011) emphasizes that Dubai as a country is based in the wilderness/desert region but it has been able to mushroom and become one of the greatest tourist attractions of the innovations it has put in place. Some of the innovative landmarks created include; Burj Khalifa, Dubai Autodrome, the Palm islands, Burj Al Arab, Wonderland and many others. This shows that innovation is the only thing that has put Dubai on the front line compared to other destinations despite it being a desert based country.

Kenyan tourism is one of the most popular tourism destinations in Africa and tourism is a key foreign exchange earner for the country. Ever since Kenya's tourism was founded on the country's rich wildlife resources (Sindiga, 1999) but there is the need of incorporating creativity and innovation because at the end of the day each destination that is coming up, one way or another is offering the same products and services and therefore there is the need to differentiate products and services or even the process of offering products or services. And that is why innovation and creativity comes in. Kenyan tourism industry is encouraging diversification of its products from the traditional beach and safari markets to create other ways of generating income by making the experience more attractive to a wide cross-section of tourists (Charles 2012). Art is one of the products that can be used as touristic attraction if it is rejuvenated and managed well. Apart from that it is evident that the locals are part and parcel of this when it comes to its production hence this shows that this type of product will definitely lead to job creation which means empowering the youth really positively.

Now trickling down on the study, the research collected 47.40% of the residents believe that it is very important for the government to support the creativity and innovations of its people but in the case of Kenya as a country, the government does not support creativity and innovativeness of its people and it is mostly because of corruption running within the government. Despite that 52.60% of the locals still believe in creativity and innovation because they get market from domestic and international tourists and residents through the support of NGOs. Some of the creative activities they take part in include: using bones to create ornaments, using plastic to make containers, plates and other home based products, using plastic to make artistic ornaments, drawings and handbags. Recycled artistic products have proven to have market according to the research collected whereby it was found 85% of the tourists participate in art tourism and equivalently 100% would initiate themselves in taking part in supporting artistic pieces that have

been made from recycled products. According to zero waste women group during the interview, Joe Biden's wife is one of their popular customers among many others. This definitely shows that market for these products is definitely available.

It is quite clear that plastic materials especially the paper bags have been and still are a menace to the country because of its destruction of the country's beauty and also led to infectious diseases and also the death of animals. And the residents of Dandora would love to see someday the dumpsite is done with. The JICA project was to take the initiative to get rid of the dump but one of the challenges they were to face is where to decompose the plastic material because it cannot be decomposed unlike the other waste found within the dumpsite. It is true that the dumpsite does not only include plastic bags or materials but they are the most dumped whereby they stand out the most. But is also clear that people have realized this and mostly the locals with the help of NGOs have taken the initiative to recycle and create lucrative artistic products which they have sold to many tourists as they pass by to their destinations or from it respectively. The demand and also the supply of the artistic recycled products are present, happening and very available but what is lacking is the support from the government in terms of marketing and supportive funds. KTDC gives loan for those who would wish to come up with touristic products but it has a lot of bureaucracy hence the locals think that it is too hard on them. Art as a product is being practiced in so many parts of the world and it is really doing them good and Kenya needs to come up with man-made products because the markets are really diversifying in terms of taste and preferences and also so that when the nature based products that are presently tourism are affected by unavoidable circumstances such as drought or floods, tourism in Kenya can still continue. An example that shows that Kenya can do really well in the contemporary art tourism is the fact that in the 19<sup>th</sup> February daily nation: weekly business magazine pg4, shows a handout photo released by world press photo and taken by US photographer Micah Albert of Redux images shows a woman who works as a trash picker at the 30-acre Dandora dumpsite, which as discussed earlier literally spills into households of one million people living in nearby slums, reading a book she came across on April 3, 2012 in Nairobi. This photo actually won the first prize in the contemporary issues single category in the world press photo 2012 contest.

## CONCLUSION

This descriptive study examined how tourism product development in terms of contemporary art can be a sustainable strategy in minimizing solid waste (plastic waste). Based on the structured questionnaires to the locals of Dandora region and interviews to the various stakeholders, several findings were found. These were; plastic waste can indeed be recycled into artistic products compared to those who thought it was impossible, the tourists do appreciate art and additionally they do adore art created from recycled products and last but not least the locals and the tourists see the need in diversification of tourism products in the country other than wildlife and beach tourism which have dominated as the tourism products and last but not least there is the need of the innovation element because it plays an important part when it comes to competition on tourist destinations and products which growing very high. This means that contemporary art especially that made from plastic waste can play a very important touristic attraction if only the government and its stakeholders will support the sector in one way or another as much as possible. Art in itself is not a new product in Kenya but it is not being marketed enough hence

has contributed to its un-recognition, although using recycled products and in this case plastic materials is what makes it new therefore impacts positively and in a big way on the go-green initiative and sustainability. This can be used other researchers to discuss the positivity or negativity of recycle tourism.

## REFERENCES

- Kombo, K.D., & Tromp, A.L.D. (2006). *Thesis Writing: An Introduction*. Nairobi: Pauline's Publications.
- Korres, G. M. (2007). The role of innovation activities in tourism and regional growth in Europe. *Tourismos: An International Multidisciplinary Journal Of Tourism* 3 (1) : 135-152 (Jun 2008)
- Suiith K (2011). *Dubai Tourism: Tourists attractions and beautiful places in Dubai*
- Sindiga, I. (1999). *Tourism and African Development: Change and Challenge of Tourism in Kenya*. African Studies Centre Research Series.
- Maranga (2005) JICA study: A comprehensive plastic waste management strategy for the city of Nairobi World's worst polluted places, 2007.
- Drucker, P. F. (1985) *Innovation and Entrepreneurship* Harvard Business Review
- Huang, A., (2010) *The Eco-Ark Pavilion in Taiwan: Taipei*, Macmillan publishers
- Micah A., (2013) Award Winning Photo. DN2 Daily Nation. National Media Group: Nairobi.
- Amitabh S., (2009) *Entrepreneurship, Startups, Word press, search engine Art from the great soviet Encyclopedia*
- Flores M.C (2008) *Plastic Materials and Environmental Externalities: Structural Causes and Corrective Policy*. Lethbridge Undergraduate Research Journal, volume 3 Number 2.
- KNCP (1997) *A Comprehensive Plastic Waste Management Strategy for City of Nairobi*. Interim Report
- Kimathi (2005) *Plastic Waste Management in Nairobi*. The Standard. Standard Media Group: Nairobi
- Marx.K (1956) *The Peasant War in Germany*. Germany.
- Villani .J. (2005) *America's 100 Best Art Towns*. American Style Magazine.
- The Great Soviet Encyclopedia (2010) 3<sup>rd</sup> Edition. The Gale Group Inc.
- Amitabh Shukla (2009) what is Innovation? Getting into the Roots. India
- Appropedia (2011) *La Yuca ecoladrillo School Room*. Dominican Republic
- Charles.G (2012) *Kenya to upscale innovative Tourism Products*. Capital Business: Nairobi
- Raija.K (2001) New product development in tourism companies: *Case studies of Nature-based activity operators*. Joensuu.
- Agence.F. (2010) *Taiwan turns Plastic Junk to Green Gold*. MNN Holdings