

Quantifying the impact of volunteerism in the framework of waste management strategies in Cyprus

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Abstract

Waste Management strategies as a result of the production and consumption line (not cycle) are on the top of the global challenges, within the framework of the seventeen United Nations (UN) Sustainable Development Goals (SDGs). Based on the World Bank projections, the global waste generation levels have been increasing in a steady rate from 1.3 billion tonnes per year in 2012, to 2.2 billion tonnes per year by 2025. This represents a significant increase in per capita waste generation rates, from 1.2 to 1.42 kg per person of which <5% is managed sustainably. This paper aims to provide a holistic approach for the role of volunteers in providing means and strategies against the illegal solid waste disposal and highlighting a series of steps for their application towards impactful campaigns. The latest approaches of volunteerism towards waste management in regards to quantifying the economic, social and environmental value of a strategy are presented and discussed.

Keywords: Let's Do It, Cyprus, volunteerism, waste management, monetization, society, environment, Corporate Social Responsibility (CSR)

1. Introduction

It is estimated that there is currently approximately 98,995,672 tons of illegally dumped waste world-wide. During the last decade several Non Governmental Organizations (NGOs) have developed successful volunteering methodologies in managing the illegal dumping and incentivizing the communities towards sustainable waste management strategies. This has been the result of the numerous effects i.e. infectious diseases, land and water pollution, flooding and loss of biodiversity, which have risen as a result of the improper waste disposal. The international movements towards Zero Waste and/or the Reduce-Reuse-Recycle (3Rs) schemes in combination to the upcoming social science of Corporate Social Responsibility (CSR), enhances the effort of corporations and the public sector in updating their agenda.

Let's Do It! World is a civic-led mass movement that began in Estonia in 2008 when 50,000 people united together to clean up the entire country in just five hours. To date, 113 countries and close to 17 million people have joined us to clean up illegal waste. The campaign cover Creating a technical solution to support mapping and clean-ups; built strategies for partnership with IT

companies; engage network developments, and several stakeholders, engage partners and volunteerism. **Let's Do It Foundation aims** to unite the global community, raise awareness and implement true change to clean the planet.

Table 1 indicates the lasted results of the volunteerism.

Table 1. Title of the table

NO OF ACTIVE CONTRIES	113
TOTAL NO OF VOLUNTEERS	18975468
%AGE OF VOLUNTEERS' FROM EARTH'S POPULATION	0.2
TONNES OF TRASH COLLECTED	533,255
KILOS PER VOLUNTEER	28.1

Cyprus was entered in the Lets DO IT on 2012 with 4000 volunteers and the total waste that were collected was 13 t (3.25 kg/volunteer) mainly PMD, while on 2015 the volunteers were 9600 and the total waste that were collected was 26 t with an the indicator to be 2.71 kg/volunteer. On 2018 the volunteers increased up to 45500 which collect 50 t of waste (mainly PMD) with the indicator per volunteer to be 1.1 kg.

Voluntarism can play significant role in the clearness of one area as littering of waste that have been disposed of improperly without consent can be removed. Volunteers can . Littering is the improper disposal of rubbish or waste objects on the ground, sea, rivers, oceans, streams and lakes. Littering is an act of discarding or scattering trash about in disorder over a socially inappropriate area. It is an ugly, expensive, widespread, and dangerous phenomenon. Littering comes about because of lack of trash receptacles, improper environmental education, laziness and insufficient consequences for the ones who litter (Conserve Energy Future, 2017). Most items that are litter are non-biodegradable in or simply disposed of by individuals (Nepadwatercoe.org, 2017). Litter results from pedestrians drooping garbage in streets and roadways, poorly secured commercial refuse; from uncontrolled building waste and workers'; people who go out to have fun, end up dumping waste in the streets especially at night (coastal areas) etc.

Discarded garbage affects every member of a community; it causes harm to people and animals alike, damages our waterways, costs us money and suggests that we do not

care for our environment (Jbgreenteam.org, 2017). In general, the effects of littering can be divided into environmental, health, economic and social impacts

The target of the action is to motivate and engaged at least 5% of the total population which is not always easy as citizens do not participate in grate debates and usually remain spectators. For some in order to motivated them, helping to make the world a better place might just be enough, but there is much more that you can offer, e.g. visibility or positive reputation (corporate responsibility).

However in Cyprus during 2017 almost 35516 Volunteers in (Figure 1) collect 19 t of MSW from 563 collection points covering the entire Island, 9 t of PMD and 10.4 t of tires



Figure 1. The contribution of voluntarism in waste collection during 2017 from Cyprus

2. Conclusions

The role of volunteers engage in activities that do not require interaction with vulnerable sectors of the population and do interact with the general public. Volunteers plays significant role in the existing waste strategies as has social, economic and environmental impacts. Citizens must be proud of the area that they live in and if a problem it is going to reduce the pride that residents have in living there and if the area has a litter problem, its residents even though their guest (tourist) don't want to spend time there, community spirit suffers and thus people's wellbeing suffers. Also littering has impact on blue economy incase waste littering exist in costal areas. There are many reports indicated that every year entered into the sea more than 500000 t of plastics affecting fisheries and tourism as well as human heath as microplastic may entered into food chain through fish

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