



## **MESPOM Conference in Environmental Science, Policy & Management**

**May 31 – June 02, 2019**

Department of Environment, University of the Aegean  
Mytilene, Lesvos Island, GREECE

### **SUBMISSION FORM:**

TITLE	<b>Market opportunities (Benefits) of the Waste Electrical and Electronic Equipment (WEEE) recycling industry (a case study of Aegean Recycling S.A. in Moria, Greece Greece)</b>
DOMAIN(S) (choose all that apply)	<input checked="" type="checkbox"/> <b>Environmental Management</b>
EXTENDED ABSTRACT:	
AIMS:  Waste electrical and electronic equipment (WEEE) –also being referred as Electronic Waste (e-waste) – is the third fastest growing waste stream globally. The quantity of e-waste discarded globally was about 50 million tons in 2018, with a 40% estimated rate of recycling. Despite that huge gap between amounts of discarded WEEE and recycled WEEE, decision makers worldwide have not emphasized enough in increasing the WEEE recycled amounts. Discarded WEEE in Greek market is estimated at about 120,000-170,000 tons annually. Of that amount, only about 54,000 ton of it has been collected for recycling in 2016. E-waste contain persistent organic	

pollutants, dioxins, radioactive substances, fluoride halides, metals – cadmium, chromium, lead, copper, zinc, rare earth elements and other hazardous elements that do not cease to be valuable as well . Well standardized recycling techniques and policies of e-waste in both quantity and quality will not only tackle dangers of hazards to human health and environment but will also become a business opportunity and be financially beneficial. Management of WEEE in EU is valued at about 2 billion annually and it is estimated to reach about 5.6 billion by 2020. The objective of this study is to examine the market opportunities of e-waste and the benefit to the environment from the e-waste recycling in Greece.

#### METHODOLOGY:

Extended literature review of the e-waste recycling market in Greece is taking place and more specifically is examined the case study of the company of Aegean Recycling S.A. in Moria, Greece.

#### (EARLY/EXPECTED) RESULTS:

In one (1) ton of waste mobile phones, 100 kg of copper, 3 kg of silver, and 150-300 g of gold can be extracted. In contrast, in one (1) ton of gold mineral, 4-23 grams of gold exist. In our work, the company of Aegean Recycling S.A. in Moria, Greece, is used as model case study. Aegean Recycling S.A. besides providing employment for more than 36 employees, its net profit in the year of 2014 was about 344,000 Euro.

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Keywords:	e-waste, market opportunities, recycling, heavy metals
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