



## Expert Facility Activity No: EFH-IL-5

### Recommendations for Israel on Recycling facilities in urban area

Version	Document Title	Author	Review and Clearance
1	Recommendations for Israel on recycling facilities in urban area	Paolo Marengo	



## THE SWIM AND H2020 SUPPORT MECHANISM PROJECT (2016-2019)

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The SWIM-H2020 SM is a Regional Technical Support Program that includes the following Partner Countries (PCs): Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine, [Syria] and Tunisia. However, in order to ensure the coherence and effectiveness of Union financing or to foster regional co-operation, eligibility of specific actions will be extended to the Western Balkan countries (Albania, Bosnia Herzegovina and Montenegro), Turkey and Mauritania. The Program is funded by the European Neighbourhood Instrument (ENI) South/Environment. It ensures the continuation of EU's regional support to ENP South countries in the fields of water management, marine pollution prevention and adds value to other important EU-funded regional programs in related fields, in particular the SWITCH-Med program, and the Clima South program, as well as to projects under the EU bilateral programming, where environment and water are identified as priority sectors for the EU co-operation. It complements and provides operational partnerships and links with the projects labelled by the Union for the Mediterranean, project preparation facilities in particular MESHIP phase II and with the next phase of the ENPI-SEIS project on environmental information systems, whereas its work plan will be coherent with, and supportive of, the Barcelona Convention and its Mediterranean Action Plan.

The overall objective of the Program is to contribute to reduced marine pollution and a more sustainable use of scarce water resources. The Technical Assistance services are grouped in 6 work packages: WP1. Expert facility, WP2. Peer-to-peer experience sharing and dialogue, WP3. Training activities, WP4. Communication and visibility, WP5. Capitalizing the lessons learnt, good practices and success stories and WP6. Support activities.



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## ABBREVIATIONS

CO <sup>2</sup>	Carbon dioxide
C&D waste	Construction and Demolition Waste
CDW	Construction and Demolition Waste
d	Day
DtD	Door-to-Door
C&D waste	Construction and Demolition Waste
EPR	Extended Producer Responsibility
GPP	Green Public Procurement
NIS	New Israeli Shekels
Inh.	Inhabitants
l	Litre
m	Month
MoEP	Ministry of Environmental Protection
MRF	Materials recovery facility
NIMBY	Not in my backyard
NIS	Shekel
p	person
PRO	Producer Responsibility Organisation
t	Tonne
VAT	Value-added tax
w	Week
WEEE	Waste Electrical and Electronic Equipment



## INTRODUCTION AND METHODOLOGY

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Israel's waste management policies and regulations have evolved from mainly addressing unregulated waste dumping in the 1980s to a focus on integrated waste management, which promotes reduction at source, reuse, and recovery. The regional and local offices of the Ministry of Environmental Protection (MoEP) are responsible for implementing waste management policy (as well as other national environmental policies). Israel's ultimate objective is a zero-waste policy, aimed at gradually decreasing the amount of non-recyclable waste created, such that within a number of years there will be only one landfill in Israel.

The collection of C&D waste in Israel, unlike the collection of the domestic waste, is not regulated by local authorities, but it is collected by either local authorities or private companies by request. The latter situation makes it difficult to ensure that the C&D waste is disposed of legally. Some 2.5-million tons of construction waste is disposed of in a regulated and orderly way. Another 1.5-million tons is disposed of illegally, often thrown into empty spaces.

The illegal disposal of wastes in open spaces has negative impact on the environment such as air pollution, emission of toxic material into the air caused by the flammable materials in the waste pile, soil and groundwater contamination due to leaking of leachate, etc.

The efforts of MoEP are now focusing on promoting the establishment of authorised sites for the disposal of the C&D waste, on assuring that this waste is transferred to the new sites and on promoting recycling of waste. Recent years have seen a growth in the recycling rate of this waste due to the operation of some dedicated recycling facilities for this waste, but there is still a need to further support this process especially with regard to the enforcement and incentives. Also, local authorities have to be more involved and provided with the tools and capacity to deal with the issue.

This activity aims to assist the MoEP in implementing the forthcoming amendment of the Cleanliness Law of Israel, for better addressing the treatment of Construction and Demolition waste in Local Authorities. It also aims to strengthen the market's capacity to increase the use of C&D recycled materials by providing assistance in policy tools and work procedures with regards to legislation, enforcement, economic tools, environmental aspects and operational incentives.

The main objectives reached by the EFH-IL-5 activity are:

- Analysis of the main barriers to recycle CDW in Israel;
- Experiences exchange, with the analysis of successful stories;
- Recommendations to develop an effective CDW strategy.

Target groups for this activity were: Ministries/Government Authorities, Local Authorities/Municipal groupings, the private sector including recycling companies, Producer Responsibility Organization (TAMIR).

The Consultant undertook the following tasks:



- Task 1: Training workshop for MoEP staff on methods for management of recycling facilities in urban areas, site visit to two CDW recycling plants in Israel and a round table discussion with local stakeholders;
- Task 2: Organization of a stakeholder workshop and meetings with MoEP representatives (Waste Division, Policy Division and Waste officers of MoEP districts) on how to build up a national strategy and case studies;
- Task 3: Organization of a workshop involving MoEP staff (Waste Division, Planning Division, Waste officers of MoEP districts) with the market build up in the focus.
- Task 4: Organization of workshop involving MoEP staff (Waste Division, EPR Division, Waste officers from MoEP districts, TAMIR-PRO) with the glass recycling in the focus.

Outcomes of the aforementioned tasks are:

- Comparative review document in policies/legislation in various EU MS;
- Recommendations for Israel on recycling facilities in urban area;
- Recommendations for implementation of the C&D law in Israel;
- Recommendations on initiatives for the reuse and recycling of C&D materials.

The activity has been developed under the 'Solid Waste Management' thematic of SWIM-H2020 SM and has been designed in complementarity with three other Expert Facility activities taking place in Israel:

- EFH-IL-1: Green and circular public procurement in central and local government in Israel, through policy development and capacity building for manufacturers and procurers;
- EFH-IL-3: Support for the plastic waste management and recycling;
- EFH-IL-4: Support for the glass waste management and recycling.

The activity took place in Israel during 2 missions:

- 2 days from Tuesday, December 4<sup>th</sup> to Wednesday December 5<sup>th</sup>, 2018. Expert Francisc Rufe, invited speaker Paolo Marengo. Here below the actions delivered during the mission:
  - o Training workshop at the MoEP Headquarter, Jerusalem
  - o Site visits at: Rishon Letzion – Municipal recycling plant and Na'an – C&D recycling plant
- 3 days from Tuesday, February 5<sup>th</sup> to Thursday, February 7<sup>th</sup>, 2019. Experts Liesbet Van Cauwenberghe and Chris Holcroft, Invited speaker Paolo Marengo. Here below the actions delivered during the mission at the MoEP Headquarter, Jerusalem:
  - o Workshop on C&D waste - EU Strategy
  - o Workshop on C&D waste – market build up
  - o Workshop on glass recycling





# 1 RECYCLING PLANTS IN ISRAEL

The description of the site visits that took place on the 5th of December 2018, as well as of the round table discussion with the local stakeholders, is reported in the following paragraphs.

## 1.1 SITE VISIT 1 - RESHON LETZION – MUNICIPAL RECYCLING PLANT

The plant is characterized by significantly high capital costs (20% financed by the MoEP) composed by 3 main sections: cracking, separation and washing. In order to sell the recycled material it is necessary to treat it until a 0-25 mm size (otherwise it is impossible to place the material on the market). The potential buyers of the recycled material are worried about the release of fake documents during the value chain. An ongoing pilot study in Tel Aviv is addressed to tackle this issue.

Figure 1-1: Site visit to the recycling plant Reshon Letzion





## 1.2 SITE VISIT 2 - NA'AN – C&D RECYCLING PLANT (NEDGEV MUNICIPALITY)

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The facility contributes to pay part of the transport in order to encourage people to deliver the material to the authorized facility.

Natural aggregates are 30% more expensive than recycled.

The managers of the facility are interested in a law that obligates minimum rate of recycled aggregates in new constructions.

All CDW is proceed until it reach 0-25mm (material with higher size doesn't have market).

'Contractors association' interested in CE mark certificate.

Figure 1-2: Site visit to the recycling plant – Nedgev Municipality





## 1.3 ROUND TABLE DISCUSSION

The local stakeholders, together with MoEP representatives and the NKE Francesc Rufe, joining the roundtable discussion are listed below:

Table 1-1: Round table discussion participants

Participant	Role	Institution
Elad Reich	Project Manager	Shapir
Hanni Cohen, Section Manager, Maskal	Section Manager	Maskal
Kornit Golwasser	Environmental Consultant	Federation of Local Authorities in Israel
Ronen Kat	Building officer	Mashcal
Hamutd Ben-Jakob	Engineer	ACB Contractor Organization
Ami Kaplan	Solid Waste Management Division	Municipality of Jerusalem
Mariana Garov	Waste management officer	Aannemers Municipality
Livnat Goldberg, Waste Division officer, MoEP	Waste Division officer	MoEP
Francesc Rufe	SWIM CDW NK Expert	Catalan Waste Agency
Nunit Merov	Environmental Planner	Netanya Municipality
Tamar Sterzer	Environmental Project Coordinator	Forum IS
Eran Shriker	Waste and recycling officer	• MoEP

Here below the main themes discussed:

- Municipalities don't know how to control the deals of the CDW management. Contractors say they don't need to control this but the final correct management.
- Contractor representatives worried with the quality of recycled materials (CE mark) and about responsibility: if an infrastructure realized with recycled aggregate presents some damages after few years, the Ministry would support them? How? (Make a law with the uses for recycled aggregates).
- How to ensure the correct management from the beginning? (Deposit in local entities or at the





authorised managers).

- Explanation of Catalonian recycled aggregates (RA) subsidy
- Landfill tax for CDW used to fund RA subsidy and studies/guidelines
- Municipalities ask for an update of the formula that relates m<sup>2</sup> of construction Vs m<sup>3</sup> of CDW. It seems to be calculating at the lower range so it results in less estimation of CDW production than real one. Then, CDW ends to illegal dump for that quantity not declared/estimated.

## 2 RECOMMENDATIONS

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Illegal dumpsites are causing significant environmental issues. The creation of a market should be based on legislative and economic instruments, addressed to rely on the quality of recycled materials and to make cost efficient the use.

The Green Public Procurement instrument seems to be promising to align the public tenders to the goal.

The competition between the owners of quarries, providing virgin raw materials, and the recycling plants, is a barrier to develop the market of the recycled aggregates.

The audit before the demolition is an effective way to take control of the site operations, implementing the selective collection and guarantying the quality of the material entering in the recycling plants.

Even though the Construction & demolition Waste topic is a huge challenge, the way to involve the stakeholders in the decision making process seems to be promising to tackle the issue in an effective way.