

Wasting waste

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Interestingly, the word "waste" has two rather opposite meanings in the dictionary. As a noun, waste is "Unwanted or unusable material, substances, or by-products" and therefore should be discarded, whereas the verb describes ones "failure to take advantage of or use (something) for profit", suggesting in this context for the possible benefits in preserving and using waste.

The first definition started to be questioned with the beginning of the recycling revolution, which represented the understanding that unwanted materials can in fact be reused in order to protect the environment. Nowadays, the second definition kicks into the consciousness of the industrial sector with the realization that waste, accustomed to be seen as a problem, is actually a business opportunity. This concept is the base for the partnerships between the Israeli milk and meat industries and renewable energy companies, in order to turn the huge quantities of organic waste they produce into electricity (<http://www.tashtiot.co.il>), thus saving the costs of both energy consumption and waste treatment (removal, transport and landfilling costs).

On the same note, why shouldn't economical units in the domestic sector, such as neighborhoods, communal villages and local municipalities, use the same set of considerations that look at waste as an economical resource?

In fact, in Israel waste was already identified as a resource by the Center for Neighborhood Sustainability (ICNS) at 2009.

According to the ICNS, waste potentially holds a dual value. First, as an alternative source for consumable materials, which gain more and more value as their natural reserves deplete, especially in the case of metals and phosphates. Second, there is a potential value in the financial burden of waste treatment being avoided. In Israel of 2015, treating the organic waste of 10,000 people costs more than a quarter million shekels (~\$64,000) each month (Lev Hasharon regional district June waste report) as landfilling tax on domestic waste has increased from 10 to 108 shekels per Ton (1080%) in the last 8 years.

In light of that, any measure that will prevent the "leakage" of this resource from a given community will contribute to its well-being by lowering the living expenses and allowing the allocation of the waste budget into preferred areas.

Today, the most profitable technique for energy production from organic waste is anaerobic digestion (AD) for biogas production, preferred mostly due to the simplicity of the process

(done by special bacteria in a water filled-container and no air) and the added fertilizer production as organic matter disassembles into nutrients. These advantages are the reason that Israeli Ministry of Environmental Protection favors it over other methods, but the last promotes mainly the construction of large scale AD facilities to treat urban waste. The lack of long term planning for small scale plants that would aid peripheral municipalities holds back the progress of the biogas field in Israel.

Domestic scale biogas systems can offer a local solution that enables any household to treat its own organic waste and enjoy the products of its decomposition. An average family of four produces 1.5-3 Kg of food waste a day that will provide 1 m³ of biogas – a flammable gas that can be used immediately for cooking, heating and lighting.

Besides the direct saving in energy costs, the availability of liquid fertilizers contribute to household and regional development by providing the opportunity for people to grow their own free organic food, create communal gardens and food forests, cover their homes with green walls and rooftops (for better and cost effective indoor climate control) while saving the use in drinking water and chemical fertilizers.

Even though modern life has taught people to look at waste as separated from them and trained to remove it from sight, there are big incentives to look at waste from a different perspective, especially because the old perception is less beneficial. Luckily, making a change is easy. All it requires is to attain existing tools, like domestic biogas units, that will allow anyone who wishes to improve the way they live immediately.

מקורות

- מערכת תשתיות. **ביוגז בתעשיות הבשר והחלב: הענף שיכול לייצר אנרגיה מהפסולת**

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* המרכז לקיימות שכונתית <http://www.bayadaim.org.il/locations/>

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