

FEASIBILITY STUDY
**Stepwise Implementation of a modern Waste
Management Solution according to the Standards of
the EU in the City/Region of Lushnja (Albania)**

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Prepared by:

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Executive Summary

The present study was developed based on the available version of the Albanian National Waste Management Plan and outlines the necessity to improve the existing Waste Management System in the City of Lushnja, respectively in the entire region. Especially a close co-operation with the local stakeholders was forced and special emphasis was put on a potential realization of future projects with support of soft-loans from Austria.

The City of Lushnja is located about 80km from Tirana in Central-West Albania in the district of Lushnja which is one of 36 districts in Albania and part of the county of Fier. The three neighbouring districts of Lushnja, Fier and Mallakastër form the so called "Waste Area 12" for which a sustainable solution for a modern and an EU conform WMgmt system is under development. Lushnja has got a population of about 55.000 inhabitants and is the second biggest city in WA 12 after Fier. It is expected that approx. 18.000 tons of MSW are generated only in Lushnja, which have to be collected, treated and disposed according to the current and future laws and directives. The recycling and composting limits, defined in the NWMP, are quite ambitious, considering the very low quality level of the present system.

This study is to focus on a stepwise improvement of the WMgmt system to meet the recycling targets defined in the NWMP. In total four separated main projects were identified, which should be implemented in parallel to each other in order to achieve the best results:

- **Source Separated Waste Collection in the City**
- **Sorting station for valuable fractions with a capacity of 7.000 - 15.000 tons/year**
- **Composting station with a capacity of 2.000 tons/month**
- **Transfer station for MSW with a capacity of 20.000 tons/year**

The study foresees that the a.m. projects shall be implemented until the year 2020. Initial steps, where first results can be achieved but fewer investments are necessary, should start immediately. It is proposed to launch separate collection of a dry fraction, containing paper, cardboard, plastics, glass and metals, as soon as possible. First recycling steps shall be undertaken with simplified floor sorting, considering also pre-sorted waste amounts from commercial clients. In a second step, the collection using the 2 bin system shall be extended to a multi bin system, where all valuable recyclables are collected in separate bins. With a modernized truck fleet and a well advised logistic concept, the operational costs of such a system can be minimized. A modern sorting station, where workers further sort the separated collection in order to increase the value of the recyclables should be put into operation until 2015.

It is proposed that bio waste, separately collected as of 2015, should be treated in a new composting station, which has enough capacity to also treat waste from surrounding areas. Only with separate collection and proper treatment the separation of organic waste from direct disposal on landfills can be realized. In addition a remarkable amount of humus will be produced, which could be of value for the local farmers.

According to latest information available to us, the new sanitary landfill of WA 12 will not be located close to Lushnja, so that a transfer station for MSW will become feasible. This transfer station shall have a capacity of 20.000 tons per year. From there waste from the entire district of Lushnja can be transported to the treatment facility (e.g. MBT, incinerator for MSW) or directly to the sanitary landfill.

The listed projects have a value of about 5,5 Mio €, whereof it is proposed to invest approx. 1,26 Mio € in the first phase. This sum contains new and more bins and a modernized truck fleet of 4 different types/sizes of press trucks for MSW.

The transfer station would cost about 0,5 Mio € but at least one hook truck with trailer and some containers should be considered as well, amounting to additional 0,22 Mio €. Composting- and sorting station will have a total value of approx. 4 Mio €, not including the purchase of land.

As the projects were drafted in a "modular" way, it is possible to develop them in parallel (recommended) or independently from each other. However, it will be feasible to finance the purchase of most of the equipment with an Austrian soft-loan. Actually it will be very important that the local decision makers find solutions to decrease the costs for financing of the investments. Soft-loans represent a feasible possibility.

Together with representatives from Lushnja a willingness-to-pay analysis in form of a questionnaire was carried out. It is obvious that most of the inhabitants are willing to pay a higher fee for the WMgmt services, as long as the improvement is visible and sustainable. The calculations have shown that fees of less than 15€ per person and year (excl. VAT) can be achieved, when modern trucks and a 2 bin system with floor sorting become operative. Until 2015 these fees will have to be increased to about 34€ per person and year (excl. VAT), due to the fact that an additional gate fee for the new landfill and higher costs for improved waste collection and -treatment (composting and sorting) will arise.

Of course, all these numbers are much higher than the current fee level the inhabitants have to pay these days (about 3,2€ per person per year) and consequently great powers of persuasion will be needed. Nevertheless several possibilities exist to keep the fee low, e.g. the optimized utilization of the treatment facilities and the reduction of bad debts.

The implementation of the introduced projects will be necessary in order to achieve the targets set in the National Plans and Strategies and the resulting costs will have to be borne by the waste producers – as it is everywhere.