

FROM WASTE TO BY-PRODUCTS, THE TREND OF SOIL AND STONES

THE MANAGEMENT OF SOIL AND STONES WASTE IN EMILIA-ROMAGNA CALLS FOR A GROWING REDUCTION OF THE QUANTITIES TREATED AS WASTE AND FOR AN INCREASE OF THOSE USED AS BY-PRODUCTS. ARPAE COLLECTS KNOWLEDGE ABOUT FLOWS AND CARRIES OUT SURVEILLANCE AND CONTROL ACTIVITIES ON THE PLACES OF PRODUCTION AND DESTINATION.

Materials from excavation activities (classified as soil and stones) have always been something between “waste” and “non waste”. Now they can be managed as by-products by way of derogation from the waste regime in compliance with Law 98 Art. 41bis or with the Ministerial Decree 161/2012 or they can be managed as waste within the meaning of Article 183, part IV of Legislative Decree 152/06. The Ministerial Decree 161/2012 applies to excavated materials from works subjected to Environmental impact assessment (Eia) or to Integrated environmental authorization (Iea) coming from “major works” for volumes above 6,000 cubic meter, while Art. 41 bis applies in all other cases.

In order to be considered by-products and to comply with provisions under Art. 41bis, the applicant or producer shall certify that a suitable place of destination for the produced materials has been identified, that these materials can be used without undergoing any prior treatment, that their use does not pose any health-related risks and is not a source of contamination. The applicant or producer of excavated soil and stones shall demonstrate compliance with these rules by submitting a “self-certification” (statutory declaration in lieu of an affidavit within the meaning of the Presidential Decree 445/2000) to the environmental agency having local competence.

In order to carry out its functions, Arpa Emilia-Romagna relies on a specific database that contains information about earth-handling under Art. 41bis, aimed at cataloguing and geo-referencing the site-specific data relating to the places of production and destination of the soil and stones handled at regional level.

More than 2,600,000 m³ of soil and stones have been handled as by-products

Year	Province									Total
	Piacenza	Parma	Reggio Emilia	Modena	Bologna	Ferrara	Ravenna	Forli-Cesena	Rimini	
2013	226.444	102.885	48.961	64.504	82.756	31.121	78.908	61.710	41.948	739.237
2014	191.596	21.622	60.940	103.941	94.123	9.262	57.414	15.782	16.934	571.615
2015	142.960	46.434	80.929	90.661	137.675	20.334	46.621	16.536	14.511	596.662
Total	561.000	170.941	190.831	259.106	314.554	60.717	182.944	94.029	73.393	1.907.513

TABLE 1 - SOIL AND STONES WASTE IN EMILIA-ROMAGNA

Soil and stones production (Ewc 170504) in Emilia-Romagna, years 2013-2015, tons.

in Emilia-Romagna from 2013 up to date. This way of managing excavated ground and rocks is not evenly spread across the Region. Arpae received 680 self-certifications in total, 29% of them came from Reggio-Emilia province, 25% from Bologna, 12% from Ferrara, 10% from Modena, 9% from Forli-Cesena, 8% from Rimini and the remaining 8% from Parma, Piacenza and Ravenna provinces.

Soil and stones are mainly produced in urban areas, since the work sites they come from are construction sites dealing with the enlargement or construction of buildings or the establishment of infrastructural networks. Once produced, soil and stones are mainly used to carry out land improvement works or to recover abandoned mining sites. By analysing the location of production and destination sites, it was possible to estimate that the average distance between the site in which soil and stones are produced and the site in which they are used is of 40 km.

Soil and stons can be managed not only as by-products, but also as waste; this onerous management is governed by Article 183, part IV of the Legislative Decree 152/06 and covers all waste falling within the Ewc (European waste catalogue) code 170504 “Other soil and stones”.

In Emilia-Romagna, the amounts of soil and stones produced and classified as

waste reached 1,907,513 tons (amounting to a total of 3,400,000 m³ of materials) in the 2013-2015 period.

Arpae carries out a surveillance and control function for the management of these materials, making sure that information reported in the self-certifications are complete and carrying out specific on-site inspections in places of production and destination.

As a conclusion for this analysis, it has been noticed that the amounts of soil and stones managed as waste tended to drop from 2013 to 2015, presumably due to the coming into force of specific legislation allowing these materials to be managed as by-products.

The possibility to manage soil and stones as by-products takes on a remarkable environmental meaning, as it contributes to the protection of natural resources and, at the same time, allows to achieve the system's competitiveness goals: cutting the costs related to raw materials procurement, reducing the use of quarry materials, lowering the use of landfills for disposal, predicting clear and rapid times for starting works in construction sites.

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