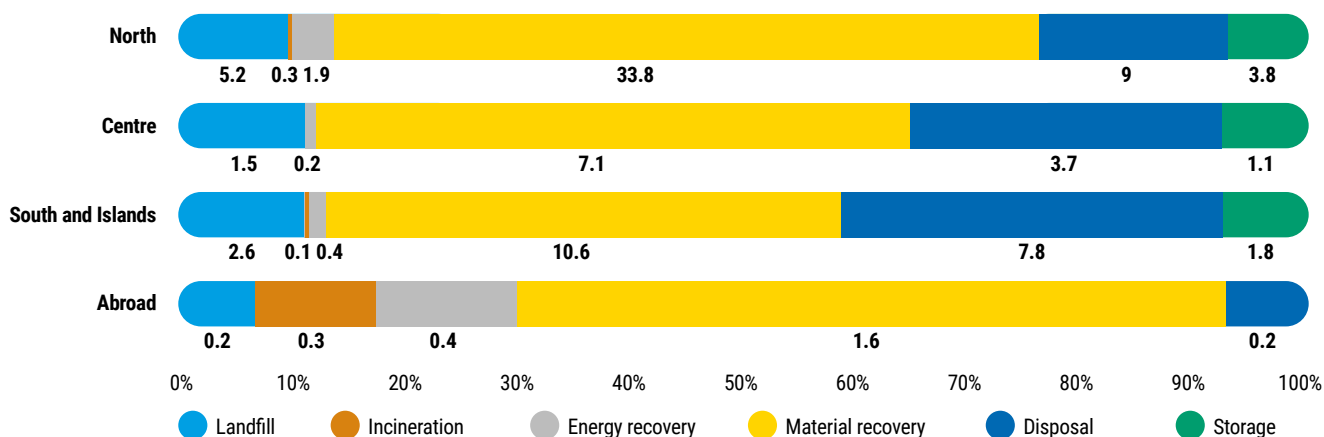


Treatment of hazardous waste by geographic area of destination (million tonnes) Perimeter 93.6 million tonnes of industrial waste



* Given the nature of special waste and the related legislation, which provides for its free movement within the Italian territory and does not limit its treatment within the region of production, Assoambiente's analysis is carried out by macro-areas (North, Centre and South).

Special waste generation in 2019 stands at almost 153 million tonnes with an increase in total production, compared to 2018, of 7.3%, corresponding to approximately 10.5 million tonnes. In 2020 there was a slight decrease in their production (-4.5%), resulting from the impact on the Italian economy of the restriction/closure measures on production activities adopted due to the COVID-19 health emergency (ISPRA Special Waste Report - 2022 edition). According to an analysis by Assoambiente (Environment En-

ergy Work Report - May 2022) on the management of special waste, the national economy encounters critical issues that impact on the objectives of the circular economy: (i) material recovery is the most used activity in the North while in the Center and in the South, disposal (including landfill) remains important; (ii) waste-to-energy/energy recovery solutions, the only possible destination for certain types of waste, are mainly sought abroad, also taking into account the limited availability of plants of this type in Italy; (iii) as

regards the circulation of special waste, about a quarter of the managed are treated in a territory other than the region of production; in fact, the linear correlation between the number of plants and volumes conferred outside the region stands at a statistical value of 90%; (iv) in general, there is a difference in the number of plants between different Regions/North-South, with a "virtuosity" of some territories in terms of response to the needs of the regional industrial context (e.g. Lombardy and Emilia-Romagna).

INTERVIEW



Interview with
**Prof.
Alessandro Bratti**

Prof. Bratti, in his previous roles from Chairman of the Ecomafias Commission to Director of ISPRA, has had more than ten years of experience during which he was able to tackle complex issues from different perspectives, including the governance of authorisation procedures for strategic projects regarding the energy and ecological transition. In your opinion, will the recent regulations, decrees, guidelines and policy directives lead to a concrete simplification by favouring the development of new projects within certain timeframes, overcoming the Nimby and Nimto effect and/or the lack of

convergence on projects (see Superintendencies blocking renewable energy projects)? Could more have been done, also through a closer confrontation between public and private?

Recent standards have certainly introduced faster procedures, but in my opinion they do not always take into account the quality of the authorisation process. While the Ispra and Arpa control bodies have shortened their response times, they have not been given the appropriate tools to improve their processes, but only those necessary to abbreviate them. Moreover, if we talk about an assessment

of the impact on the environment, for example, the studies proposed by companies are often not well made and are sometimes incomplete and require additions, lengthening the response time. I consider the technical guidelines to be a very important instrument: it is essential that these specialised manuals, I am referring in particular to the SNPA (National Environmental Protection System) guidelines, can be discussed with representatives of the manufacturing world before they are finally issued by the competent bodies. I would also like to emphasise that, often, when talking about simplification,

attention is only paid to the regulatory part, completely neglecting the procedural issue, which is of fundamental importance for some processes. For example, conferences of services must truly be places where people work together, avoiding the constant postponement of decisions.

The issue of the acceptability or not of installations in the territory is much more complex, and must also take into account the quantitative and qualitative strengthening of territorial technical bodies. I am mainly referring to the Arpa bodies and Prevention Departments for public health. Citizens, especially in Italy, are extremely distrustful of companies and need to be able to rely on public structures to provide them with environmental and health guarantees.

Among the delays, that of the so-called End of Waste decrees has been 'stemmed' to date with the referral to the region on a 'case by case' basis? A missed appointment of national consultation that falls on the local authorities, who only have the SNPA guidelines as a reference. For operators, another authorisation obstacle. Lights and shadows of the System, what are the repercussions and what actions to implement?

The process of End of Waste decrees is too long and tortuous. The so-called "case-by-case" has undergone regulatory interventions bordering on constitutionality. The standard was changed in a short period of time, throwing into disarray the companies that, as is well known, need time to make investments. The SNPA guidelines are also an attempt to resolve more administrative issues that the legislature, due to different visions of the political forces in government, was unable to resolve. Arpa and Ispra are very careful not to encroach on fields for which they are not responsible.

The National Waste Plan is currently being drafted. In this plan, as

operators, we have found some deficiencies, including a planning of future plant requirements, both for municipal waste and special waste, necessary to close the infrastructure gap (landfills and Waste to Energy) and achieve the targets set by European directives on the circular economy. What are the possible answers, including plant/technological solutions, to reverse this trend?

Italy is historically a country with a structural plant deficit. The phenomenon of illegal waste trafficking is so far-reaching also due to the fact that there is no adequate public-private system for managing the treatment and disposal cycle. A context in which the organised underworld has found fertile ground, causing environmental damage over time and draining resources from the legal supply chain.

Today, the National Waste Management Programme indicates both the type of plants and other elements useful to the regions for proper planning to reach the targets set at European level.

Substantial resources are made available in the PNRR to build new sorting and treatment plants, possibly including chemical recycling.

In Italy, unlike countries such as Germany, Austria, Sweden, etc., there is a lack of traditional plant hardware and it is therefore necessary to partially fill this deficiency. Therefore, some WTE equipment is probably necessary.

Remaining in the area of special waste for remediation, the scarcity of plants in Italy is a problem for operators who are forced to send them abroad to comply with decrees. A situation that is worsening given the ever-increasing restrictions on delivering waste across borders dictated by European legislation based on respect for the principles of proximity, priority of recovery and self-sufficiency of each State. What can be done to make authorities and territories aware of the desirability of on-site and/or local-regional disposal solutions?

It must be made clear that some environmental wounds generated in the past are difficult to heal completely. Situations need to be kept under control through systematic environmental and sometimes health monitoring. Transporting waste from one place to another is a nonsense that risks feeding a market in some cases bordering on legality. There is a need to invest in on-site remediation technologies, monitoring and knowledge dissemination, involving citizens step by step.

Another important segment in waste treatment and recovery is that of civil wastewater sludge, which is a critical issue for several regions in Italy. Among other things, regional regulations are moving in the direction of limiting the spreading of recovered sludge in agriculture.

What regulatory developments would you like to see to regulate the recovery and reuse of wastewater sludge?

Civil wastewater sludge does not always meet the basic requirements to be used in agriculture. Unfortunately, our purifier plants are often "mixed" and undersized. It is therefore necessary, even in this case, to distinguish between a sludge with suitable characteristics that, following ad hoc treatment, can be effectively distributed in agriculture as it contributes organic substance, and one in which the chemical elements present, while remaining below certain concentrations, may constitute a potential danger to the soil and, consequently, to people.

In the near future, what solutions can be used to divert an increasing proportion of sludge from disposal and promote its increasingly sustainable recovery?

Here again, technology can help us extract valuable elements from this sludge and send what is left for energy recovery.