

Environmental data

7.4 Waste

Novozymes continuously strives to optimize its operations in order to reduce and mitigate negative impacts on the environment. That is why the responsible disposal of waste and by-products is important to Novozymes' operations.

Novozymes' waste and by-products consist of three broad categories: biomass, nonhazardous solid waste and hazardous waste. Each production site regularly reports waste and by-products generated according to category and disposal method.

Biomass, which accounts for approximately 98% of the total waste and by-products generated by Novozymes' manufacturing sites, is a by-product rich in nitrogen and phosphorus. The majority of biomass generated is recovered, converted and sold to local farmers as NovoGro®, an organic

agricultural fertilizer. In 2016, Novozymes diverted 97% of its biomass from landfill and incineration in this way.

Solid nonhazardous and hazardous waste include materials such as paper, food waste, laboratory waste and chemicals. This accounts for approximately 2% of the total waste and by-products generated. While Novozymes strives to increase the amount of solid waste diverted from landfill and incineration, the relative impact is too minor to set a target.

One example of how Novozymes worked to increase its diversion rate in 2016 comes from Brazil, where the site team developed new partnerships with local firms to co-process solid waste. The production site now sends the majority of its solid waste to a local cement kiln for energy recovery and the organic food waste for animal feed.

In 2016, the total solid waste disposed of to landfill and/or incineration was 6,420 tons. The rate of recycling of solid waste was 44% in 2016, compared with 50% in 2015.

Novozymes' management approach to waste and by-products is site specific. This is because waste handling is a complex issue that is regulated locally and involves many external service providers. Going forward, Novozymes intends to improve transparency regarding waste management and recycling potential across its production sites. In the coming years, Novozymes plans to pilot a new framework to identify opportunities to increase waste diversion across three of its largest production sites in Denmark, the US and China.

§ ACCOUNTING POLICIES

Biomass is measured or calculated on the basis of volume or weight produced and transported from Novozymes as liquid fertilizer (NovoGro®), converted to a fertilizer product with a higher dry matter content (NovoGro® 30 or compost) or dried and used as fuel for energy production. Biomass from a newly built plant is sent for landfill with energy production (biogas) as a temporary disposal method.

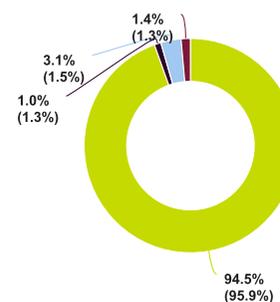
Waste is the registered volume of waste broken down into hazardous and nonhazardous waste, and by disposal method. The amount recycled is the quantity recycled internally or sent to an external service provider for recycling. Biomass is not included in the reported amounts of waste.

Biomass

1,000 tons		2016	2015
NovoGro®		375	309
NovoGro® 30		152	153
Compost		13	47
Landfill		10	8
Biomass, total	ESG	550	517

Waste and by-products recovered 2016 (2015)

- Recovered biomass
- Recovered (recycled) solid waste
- Biomass sent for landfill
- Solid waste sent for landfill/incineration



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7.4 Waste (continued)

Waste

1,000 tons	2016	2015
Nonhazardous waste		
Incineration	1.9	1.2
Landfill	4.1	3.8
Recycling (external)	4.3	4.4
Recycling (internal)	0.1	-
Other	-	0.2
Nonhazardous waste, total	10.4	9.6
Hazardous waste		
Incineration	1.4	1.4
Landfill	-	0.1
Recycling (external)	0.2	0.1
Recycling (internal)	1.4	2.1
Other	0.1	0.1
Hazardous waste, total	3.1	3.8
Waste, total	13.5	13.4