



Restoring
brain health

CIRCULAR ECONOMY AT LUNDBECK

Sept 2019





HSE Policy



Lundbeck's Health, Safety and Environment (HSE) policy supports our commitment to act responsibly and is an integral part of our Code of Conduct and sustainability framework.

Lundbeck aims to be an attractive workplace. Therefore managers, employees and HSE professionals collaborate across the organization to protect the environment and provide a safe and healthy work environment.

Our ambition is to be among the leading pharmaceutical companies in the fields of health, safety and environment.

Ambition

We protect the environment by minimising our environmental impacts.

We monitor the environmental effects of our active pharmaceutical ingredients and apply this knowledge to the design and manufacturing process.

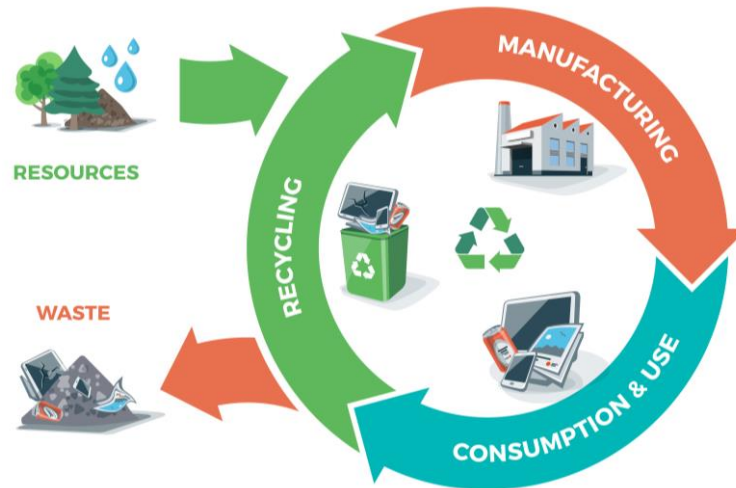


Ambition: Responsible consumption

- ★ Increase recovery of solvents
- ★ Increase recycling of waste
- ★ Reduce the use of disposable tableware
- ★ Increase cooperation with suppliers on sustainable solutions
 - ★ Initiate use of recyclable packaging materials and plastic
 - ★ Improve leasing/take back agreements for relevant equipments

Circular economy in pharmaceutical companies

- Improve health – avoid illness



- Recyclable packaging materials
- Recycling of waste ✓
- Reuse of materials e.g. devices, office and IT equipment ✓
- Industrial symbiosis

- Take back schemes
- API in the environment ✓

- Green chemistry – optimize process yield ✓
- Renewable energy ✓
- Recovery and reuse of solvents ✓

- Shared economy (Leasing, Car sharing, Bicycle sharing) ✓

Specific challenges for pharmaceutical companies

- Reuse of packaging materials – No go if product contact or labelling
- Life extension – not possible
- Regulatory challenges e.g. not possible to re-use materials in the products and packaging materials

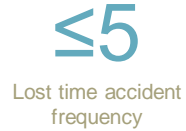
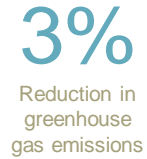
Identified possibilities for improvement

- ★ Reuse of chemical waste
- ★ Utilisation of wastestreams as biogas
- ★ Resale of used production equipment

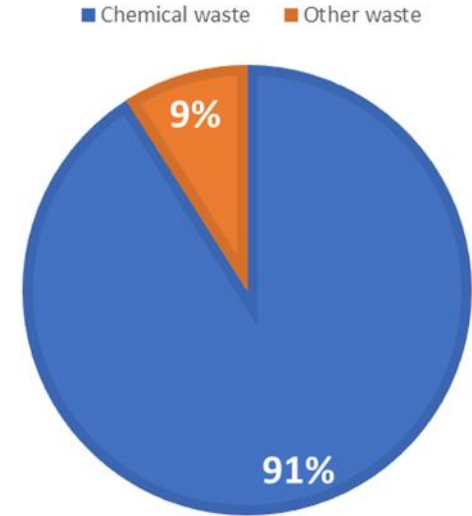
- ★ (Packaging design of new products)
- ★ (Continue to push Take back schemes)



Corporate HSE targets 2019

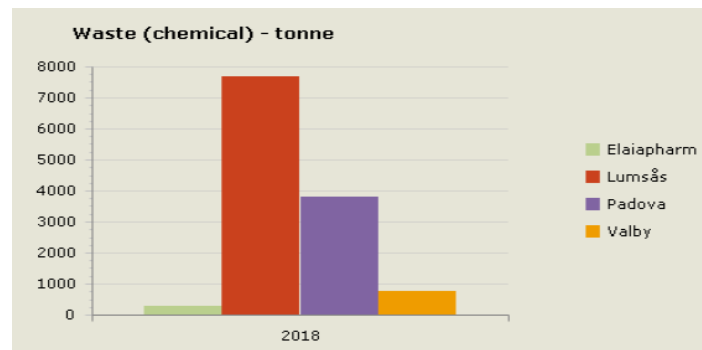


Waste in Lundbeck 2018



Recovery of solvents in 2018

- ★ In 2018 our chemical site in DK had:
 - ★ 7.617 tonnes of chemical waste for incineration



- ★ Internal and external recovery at chemical sites:
 - ★ 76% of the most used solvents at our chemical site in DK (Internal recovery of eg. Toluene, heptan, ethanol, acetone, ethylacetat, acetonitrile, THF).
 - ★ Our internal recovery avoid purchasing of app. 5.600 tonnes of solvents.
 - ★ 36% of all solvents at our chemical site in I (external recovery).

Challenges

- ★ Worries about on going Seveso regulation
- ★ Heavy workload about Seveso and renewal of environmental appro
- ★ Lack of capacity for storage of separated waste
- ★ Implementation of new air treatment system (RTO)
- ★ Require new work procedures
- ★ Business case okay, but not extra ordinary

Future initiatives

- ★ Increase internal recovery
- ★ Implement RTO
- ★ Continue to look for new possibilities for recovery