

Shit got real!

IT'S TIME TO CLEAR OUT PLASTIC
& CHEMICALS FROM NAPPIES,
NOT THE POO 🍌

We call on policy makers to speed up the transition
towards better, safer and circular nappies
for all.

POLICY PAPER
ZERO WASTE EUROPE, APRIL 2021





This year, for [#ReusableNappyWeek](#), we throw the spotlight on baby nappies by:

- 💩 Exposing the impacts related to the production and consumption of conventional single-use baby nappies;
- 💩 Showcasing the reusable solutions and their benefits; and
- 💩 Demanding policy change at the European, national and local level.

So let's dig into it, one poop at time.

💩 What are the impacts of single-use baby nappies?

Environmental

Single-use baby nappies are designed to be used just once and thrown away. They are made of **61% of plastic and other mixed materials** (common ingredients include *wood pulp, cotton, viscose rayon, polyester, polyethylene, polypropylene, adhesives, and dyes*). **Together with the presence of organic/excreta after use, this makes their collection and recycling technically and economically complex and expensive.**

In 2017, it was estimated that **6.7 million tonnes of single-use nappies waste was generated in the EU-28** (2.7% of the total municipal solid waste), which **typically end up in landfills (87%) or are incinerated (13%)**, wasting resources and producing negative environmental impacts.

In addition, there is a **significant impact also coming from the production process of these products.**

Check out some data below:

- It takes over 1,500 litres of crude oil to produce enough single-use nappies for a newborn baby until they become potty trained (at 2.5 years);
- More than 90% of water and energy consumption and land use occurs during the pre-use stage of the single-use nappy life cycle (softwood production, pulping and nappy industrial production).

Likewise, **the use of single-use nappies by a child** over a two and a half year period (which is the average time children use a nappy) would **result in producing approximately 550 kg of CO₂ while increasing global warming and exacerbating climate change.** This equates to an estimated total global warming potential in the EU-27 of approximately 3.3Mt of CO₂ equivalents per year (assuming there are 15 million babies using nappies in Europe).





Economic

It's also worth to mention the **economic impacts of single-use nappies**, for instance:

- The collection costs related to this waste stream in Europe are significant. The cost varies from €1 per inhabitant per year in some regions in Greece and Italy, to almost €10 in Ireland;
- The costs resulting from the final treatment of this waste stream, consisting of incineration, landfill and/or mechanical biological treatment (MBT) also ranges widely, depending on the Member State. The total typical charge [1] to landfill one tonne of municipal waste in the EU, ranges from €17.50 in Lithuania to up to €155.50 in Sweden. As for incineration, it ranges from €46 in Czech Republic to €174 in Germany.

In fact, current disposable baby nappies add an extra burden to the waste management, as they require frequent collection. Therefore, by reducing this waste stream, it would be possible to also optimise substantially the collection of other waste streams.

Health

Lastly, but definitely not least, there is quite a 💩 load of chemicals in disposable nappies that can be harmful to babies.

A recent risk assessment conducted by Anses [2] (the French Agency for Food, Environmental and Occupational Health & Safety) **detected a number of hazardous chemicals in disposable nappies that could migrate through urine, and enter into prolonged contact with babies' skin.** The assessment showed that threshold values were exceeded for several chemicals, including fragrances (butylphenyl methylpropional, hydroxyisohexyl 3-cyclohexene carboxaldehyde), certain polycyclic aromatic hydrocarbons (PAHs), PCB-126, and all the DL-PCBs, dioxins and furans. Some of these chemicals are added intentionally, such as fragrances that could cause skin allergies. Other identified chemicals come from contaminated raw materials or manufacturing processes. Most manufacturers of baby nappies do not specify all the ingredients used in the products.

Therefore, **there is work to be done to make eco-friendly, toxic-free, and plastic-free nappies readily available for babies!**

[1: tax plus the middle of the range of gate fees)

[2] Further info at:

<https://www.anses.fr/en/content/anses-proposes-eu-wide-restriction-hazardous-chemicals-disposable-diapers>





👤 What are the benefits of reusable nappies?

Reusable and toxic-free alternatives to single-use baby nappies already exist, and there are a series of advantages related to these reusable products, including benefits for the environment, public health, cities' budgeting and for consumers' pockets.

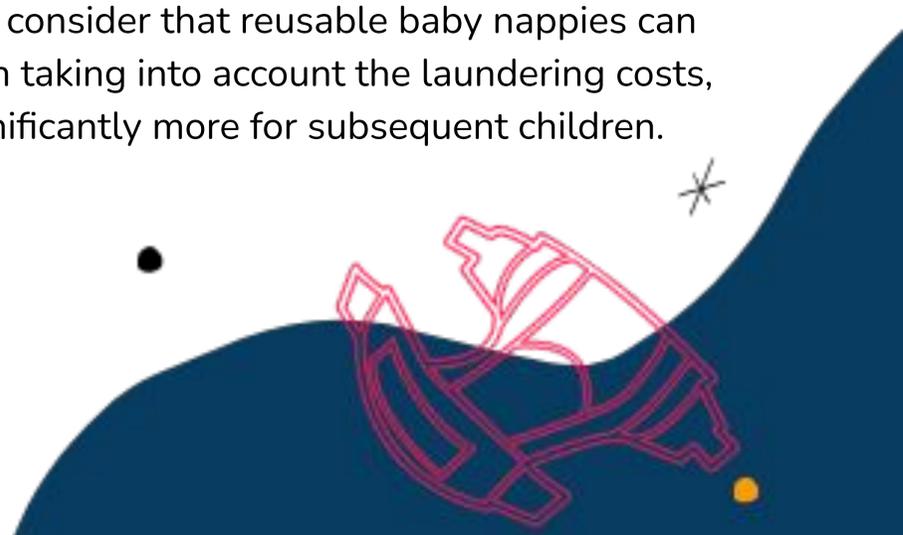
Environmental

- **Waste reduction:** A family that chooses reusable baby nappies can prevent **99% of the waste that would be generated by using single-use ones**. These reusable nappies can reduce nearly 900 kg of waste generated by one child during the first 2 years of age. It means that **if only 20% of children using nappies switched to reusables, the amount of waste that could be prevented in the EU-27 would be more than 1 million tonnes being generated annually**, going from 6.7 to 5.4 million tonnes. Moreover, these nappies can be reused when the baby has grown up, meaning that they could be used by other children, relatives, friends, or others.
- **CO2 emissions:** The carbon footprint of a nappy can be reduced by **40%, equivalent to some 200 kg of CO2, over the two and a half years, by swapping to reusables**. This reduction is possible by washing nappies in a fuller load, outdoor line drying all of the time, not washing above 60°C and reusing nappies either with a second child (if it is the case) or acquiring them via second-hand market.
- **Resource use:** Single-use baby nappies use **20 times more land for production of raw materials and require three times more energy to make than baby cloth nappies**.

! Although water usage can be higher for reusable nappies, the difference compared to single-use ones is not that representative if washed in a water-efficient front-loading washing machine and line-dried. The impacts of reusable nappies are highly dependent on the way they are laundered and, in contrast to single-use nappies, it is consumers' behaviour after purchase that determines most of the impacts from reusable nappies. Therefore, the more conscientious the consumer is during the use of these products (e.g: washing, etc.), the lower is the overall impact.

Economic

- **For local authorities:** The potential waste reduction can be translated into really high economic savings for the municipality due to lower management and treatment costs (for example, lower collection costs thanks to a reduction in the frequency of collection), as well as a reduction in the costs coming from incineration and landfill.
- **For consumers:** One of the biggest costs in the early years of being a parent are the cost of nappies. **The use of reusable nappies results in significant economic savings (between €200 and €2,000) compared to single-use ones**. The saving increases if we consider that reusable baby nappies can be used by different siblings or bought second-hand. Even taking into account the laundering costs, the savings could be up to €1,800 for a first child and significantly more for subsequent children.





Health

Reusable baby nappies reduce chemical exposure for the baby as the materials next to their skin are almost always plastic-free materials like cotton or bamboo.

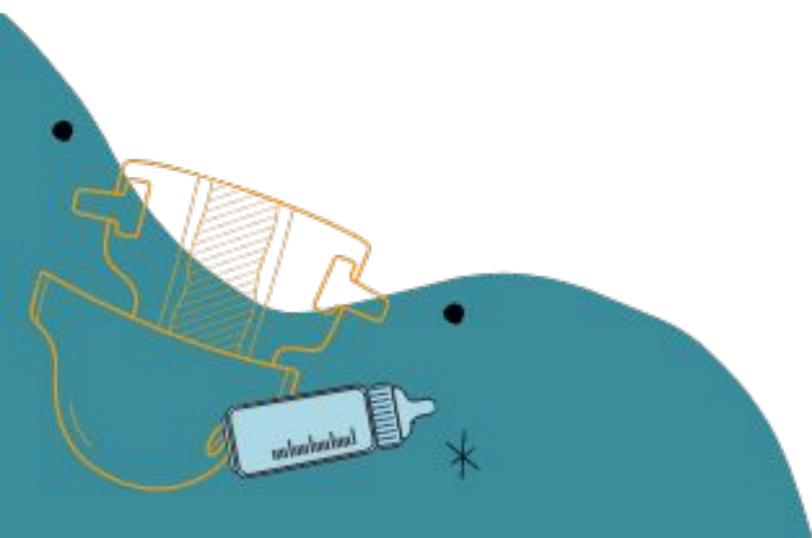
Apart from the significant environmental, economic and health issues highlighted, it's also a **relevant social justice issue**, as the options with the lowest upfront cost are often those with the most potential to damage our health and planet - and so people with the least economic power have the greatest exposure to these dangerous products.

Best practices & local initiatives

In Europe, there are some great examples of local authorities offering economic incentives or setting up other measures to encourage the use of reusable nappies in order to reduce waste and avoid waste management costs and environmental impacts.

Subsidies & economic incentives to encourage the use of reusable nappies

- **In Belgium**, for example, about 40% of cities give subsidies to families that use cloth nappies. On presentation of an invoice to the city council, families can receive a refund (typically €100 or more). This measure aims to encourage the use of reusable nappies.
- **In the UK**, more than 70 municipalities offer economic incentives, such as cash-back schemes, free trial kits and vouchers, to promote reusable nappies. Since 2004, in Derbyshire County, for example, the city council has offered a £25 (€24) voucher to encourage people to use reusable nappies. A similar system exists in Milton Keynes, where a cash-back incentive scheme offers families who invest more than £60 in reusable nappies a repayment of £35 to £40 (€34 to €39). In Leeds, parents can get either a free trial pack or £30 (€29) cash-back when they spend £50 (€49) on new or second-hand real nappies. One trial pack or cash-back is available per child.
- **In Italy**, the policy of encouraging washable nappies began in 1997, in the municipality of Torre Bondone, with more than 100 municipalities, provinces and regions now offering a range of incentives. In Colorno (Emilia Romagna), the local administration offers a €50 voucher to buy a reusable nappy kit that costs €120.
- In 2011, **in Sant Cugat (Catalonia, Spain)**, the city council offered 50 families a set of 15 cloth nappies, three nappy boosters and 100 nappy liners to avoid the use of single-use nappies. The sets were subsidised at 75% by the city council.





Laundry systems for reusable nappies

Thanks to incentives created by many municipalities in Europe, many families have access to safer and cheaper options than single-use nappies, saving money to the community and protecting the babies' health. This is possible through home-washed nappies and laundry systems that collect, clean and distribute nappies to nurseries, kindergartens and families. Some examples below:

- [Nappy Ever After](#) (London, UK)
- [Alsace Eco Services](#) (Strasbourg, France)
- [Lavanda](#) (Bologna, Italy)[3]
- [Panda](#) (Barcelona, Spain)
- [Washcot](#) (Belgium)

Many similar systems already exist across Europe. Catalonia, for instance, has had several pilot projects to introduce reusable nappies in kindergartens, which have proven to be an economic saving for schools and families, as well as a way to promote reusable nappies among parents.

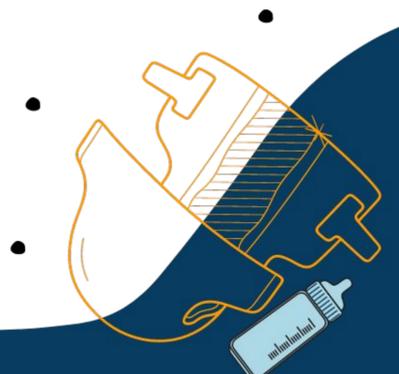
Together with the implementation of European and National legislation, local initiatives are crucial in accelerating the transition towards zero waste and supporting local reuse business models to grow. For example, municipalities can implement specific regulations to restrict the use of single-use products in public facilities within their jurisdictions, as well as designing local waste ordinances and fiscal ordinances to promote reusable solutions. For citizens, imposing taxes on the most polluting items and/or individualised waste management models (e.g. Pay-As-You-Throw (PAYT) systems) can create incentives to reduce their consumption of single-use products.

We need policy change!

Addressing the issue of single-use baby nappies requires a systemic approach from their production to their disposal, and legislation plays a key role in making the transition towards better, safer and circular nappies for everyone.

In line with the circular economy, the European Green Deal and Sustainable Development Goals, **European, national, and local authorities should adopt a strategy to increase the market for reusable nappies, while ensuring that their single-use equivalents are collected separately and recycled effectively.**

[3] Further information: [The State of Zero Waste Municipalities](#) (2020), page 37.





At the EU level, the European Commission's upcoming Sustainable Product Policy Initiative is a great opportunity to address this issue, and at the national level the transposition and implementation phase of the Single-use Plastic Directive presents a great occasion for Member States to go beyond and include single-use baby nappies by committing to more ambitious measures and facilitate the development of reuse models.

This strategy should include a set of complementary measures including:

- **Waste reduction and reuse targets,**
- **Financial incentives** to promote reusable products and systems and to make them more competitive,
- Implementation of **extended responsibility schemes (EPR) with eco-modulation of fees** (covering the costs of awareness-raising measures, the collection, transport and treatment of products, clean-up costs, data gathering and reporting), **with part of the fees dedicated to financing the transition from single-use to reusable systems** (e.g. local washing systems for reusable nappies); and
- Impose **restrictions of hazardous substances and mandatory transparency on the ingredients list** from producers to address the presence of toxic chemicals in these products.

There is no one stand alone solution or silver bullet to address this issue, a set of comprehensive measures (legislative, economic, educational, etc.) must be implemented across all levels - European, national and local.

Further information can be found at:

- [Reusable Nappy Week 2021](#)
- [The environmental and economic impacts of menstrual products, baby nappies and wet wipes;](#)
- [Existing measures & policy recommendations to minimise the impact of menstrual products, nappies & wet wipes;](#) and
- [Policy recommendations to make menstrual products, nappies and wet wipes circular.](#)





Zero Waste Europe is the European network of communities, local leaders, experts, and change agents working towards the elimination of waste in our society. We advocate for sustainable systems and the redesign of our relationship with resources, to accelerate a just transition towards zero waste for the benefit of people and planet.



#breakfreefromplastic is a global movement envisioning a future free from plastic pollution made up of 1,900 organisations from across the world demanding massive reductions in single-use plastic and pushing for lasting solutions to the plasticpollution crisis.



The Nappy Alliance is a coalition of independent providers of reusable nappies which exists to promote the economic and environmental benefits of reusable nappies and greater consumer choice for parents.



Zero Waste Europe acknowledges funding from the European Union. The sole responsibility for the content of this publication lies with Zero Waste Europe. It does not necessarily reflect the opinion of the funder mentioned above. The funder cannot be held responsible for any use that may be made of the information contained in there.

Author: Larissa Copello, Consumption & Production Campaigner at Zero Waste Europe.

Editor & Designer: Rossella Recupero, Communications Officer at Zero Waste Europe.

Brussels, APRIL 2021

