

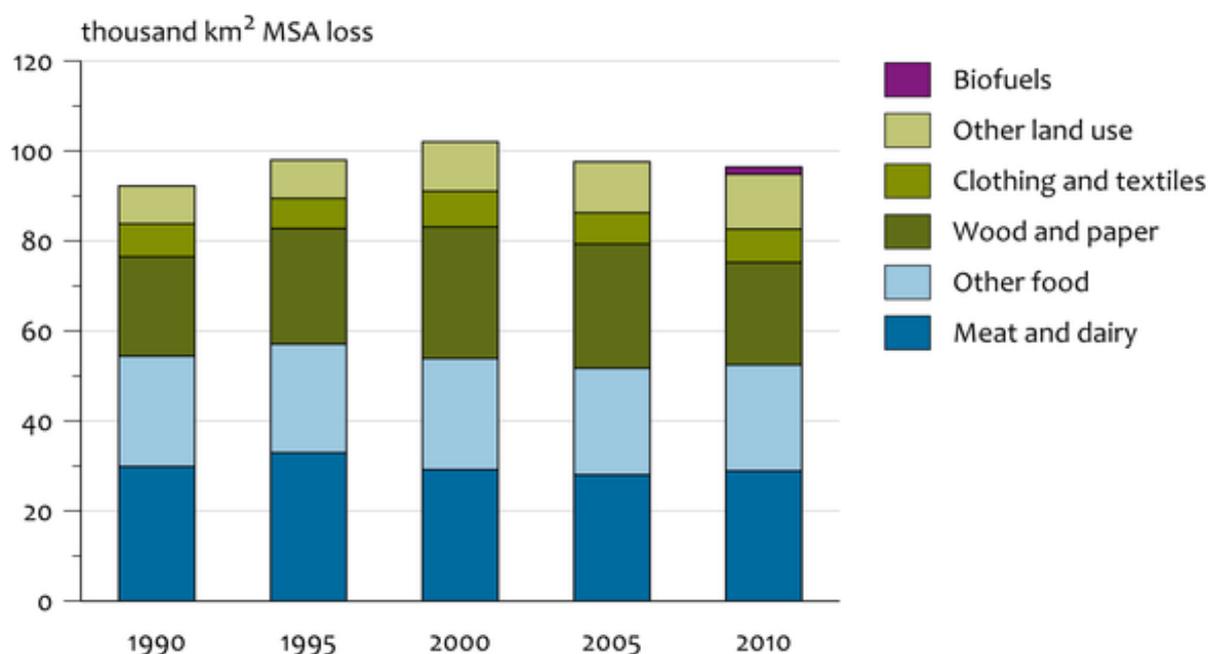
Dutch biodiversity footprint, 1990 - 2010

Indicator | 5 August 2016

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The total Dutch biodiversity footprint increased by 11 percent between 1990 and 2000 and has decreased since then. Compared to 1990 the footprint in 2010 increased by 5 percent. The Dutch biodiversity footprint is a measure for global biodiversity loss due to human consumption in the Netherlands.

Global biodiversity loss due to Dutch consumption



Source: PBL.

PBL/oct14
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Trend in biodiversity footprint

The total Dutch biodiversity footprint increased by 11 percent between 1990 and 2000 and has decreased since. In 2010 the footprint was still 5 percent higher than in 1990. The year 2010 is the final year for which overall data were available to calculate biodiversity impacts of consumption (Wilting et al. 2015). The results include the impacts of land use, nitrogen emissions, fragmentation and infrastructure. The impacts of greenhouse gas emissions and climate change were not included in this trend calculation.

Food production shows large impacts on biodiversity

The land area needed to meet Dutch consumption by citizens and government - the Dutch land footprint - was estimated to be three times the land area of the Netherlands. The largest portion of this area (over 80%), obviously, is outside the country's borders. Land use goes with several environmental pressures. Therefore, in areas of changing land use, populations of species that originally lived there may decrease or disappear completely (Rood et al. 2004).

Biodiversity loss is relatively large for food production. In order to produce food (plant and animal based) intensive production methods are used. This involves land use changes whereby pristine nature is transformed into production land.

Furthermore, intensive production methods cause environmental pressures outside the production areas themselves because of, for instance, nitrogen emissions and effects of infrastructures necessary for production. Wood and pulp production cause relatively little biodiversity loss, because the loss of native species is less in managed and semi-natural forests than in agricultural areas (Alkemade et al. 2009)

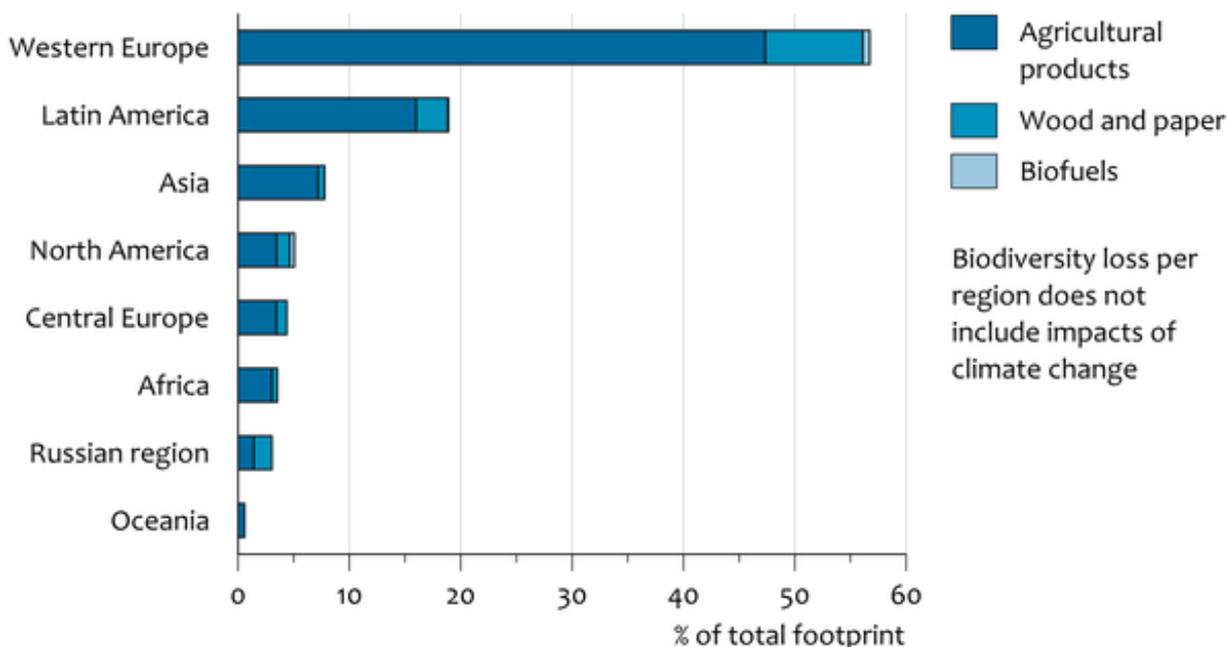
Changes in wood and paper production mainly explain the decline after 2000

The product group 'wood and paper' caused the major part of the decrease since 2000. This product group requires less and less land due to the increasing use of high-productive plantations for wood production, which make efficient use of land. Also there are shifts in construction materials from wood to the use of other materials. Additionally, the decline after 2005 was partly due to the economic crisis, which had a major impact on the construction sector in particular.

The decline in the biodiversity footprint is further caused by a decrease in land use for food and clothing. . In 2010, slightly more than one percent of the total land use for Dutch consumption was necessary for production of agricultural biofuels, which form a relatively new product group with biodiversity impacts.

- [Land footprint of Dutch consumption, 2010!titel!](#) [5]

Biodiversity loss per region



Source: PBL.

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Land use-related biodiversity losses are mainly in Western Europe

The major part of biodiversity losses through land use were in Western Europe (almost 60 percent). This is also the region from which the Netherlands obtained most of their commodities and products. Food and agricultural products constitute the largest group. Nearly 20 percent of all biodiversity losses occurred in Central and South America. These were largely due to the production of food.

There are several strategies to reduce biodiversity footprints

There are many possible options to reduce the biodiversity impacts of consumption. Here we distinguish three categories of options that can help different actors to decrease the biodiversity footprint. A first category is to reduce local environmental impacts associated with the production of commodities. In this way the ecological impacts of land use are decreased. An other category of options to reduce biodiversity losses is related to producing and processing semi-manufactured products and consumer goods more efficiently, for instance by limiting the total use of natural resources, such as land and raw materials. The third category of options concerns changing consumption patterns by making other consumption choices with lower biodiversity impacts.

- [Verduurzaming handelsketens](#) [9]

Policy on reducing biodiversity footprints

The Dutch government strives for reducing the impacts on biodiversity due to consumption (LNV, OS and VROM, 2008). The promotion of sustainable use of biodiversity and natural resources is one of the strategies. Creating more sustainable supply chains of wood, soy, palm oil, biomass, and fish is an important part of the approach.

- [Verduurzaming handelsketens](#) [9]

References

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CBS, PBL, RIVM, WUR (2016). [Dutch biodiversity footprint, 1990 - 2010](#) [13] (indicator 1464, version 02 , 5 August 2016). www.environmentaldata.nl. Statistics Netherlands (CBS), The Hague; PBL Netherlands Environmental Assessment Agency, The Hague; RIVM National Institute for Public Health and the Environment, Bilthoven; and Wageningen University and Research, Wageningen.

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