Background

Soy

Growing global demand for meat and dairy products has contributed to the doubling of soybean production in the last 20 years.

Soy is primarily used to feed pork, poultry, and dairy cows, though significant amounts are also used to produce vegetable oil and biodiesel. Large soybean fields in the tropics, particularly in Latin America, are often planted on newly deforested land—or they may expand onto former pastureland, pushing cattle to the forest frontier.

Every year around 480,000 hectares is deforested for soy in major soy-producing tropical countries. Soybeans are a highly valuable crop for several reasons. As legumes, they "fix" nitrogen, reducing the need for nitrogen fertilisers. An excellent source of protein, soybeans are also richer in oil than most legumes, making them a good source for vegetable oil and biofuels.

Until a few decades ago, tropical forest soils were not considered viable for soybeans. However advances in farming methods and crop varieties made it possible to grow soybeans profitably in new environments, including tropical forests.

Before long, Brazil became the second largest soybean-producing country in the world—and soybeans became one of the leading drivers of deforestation.

High-quality soy protein is fed to farmed animals and fish to support growth and healthy development. Soybean meal, soy protein concentrates, and other vegetable proteins and oils, can replace from one-third to one-half of the fishmeal in feeds for many farmed fish species, reducing the need for marine ingredients from capture fisheries.

Oil palm

Palm oil is an edible vegetable oil that comes from the fruit of oil palm trees. Two types of oil can be produced; crude palm oil comes from squeezing the fleshy fruit, and palm kernel oil that comes from crushing the kernel, or the stone in the middle of the fruit. What is left when the kernel has been squeezed is palm kernel expeller.

Palm oil has been, and continues to be, a major driver of deforestation of some of the world's most biodiverse forests, destroying the habitat of already endangered species like the orangutan, pygmy elephant and Sumatran rhino. This forest loss coupled with conversion of carbon rich peat soils are contributing to climate change. Oil palm products are rarely used in aquaculture diets. On the animal nutrition side they can be included in early life diets for piglets and calves among other applications.

Value chains

This is the Nutreco sourcing policy specific for soy and oil palm ingredients, focused on deforestation and land-use change to ensure compliance with the Nutreco Sustainability Road Map 2025 on the topics of Climate & Circularity and Biodiversity & Ecosystems. By the end of 2025, our ambition is to source soy and oil palm ingredients that are free from both legal and illegal deforestation, with the purpose of limiting our impact on biodiversity and climate change. This is defined as Class A opposite. Class C-D are alternate valuec chains for soy and oil palm ingredients available to support us with our ambition. To achieve deforestation-free soy and oil palm ingredients, all these value chains will be employed throughout the implementation of this policy.

	Traceability criteria	Purchasing criteria	Sustainability claims
CLASS A	The soy or oil palm ingredient is traceable back to a country or region with a low risk of deforestation. **> See Appendix I** The soy or oil palm ingredient is traceable back to a country or region with a high risk of deforestation. **> See Appendix I**	**1.** If the ingredient is from a region with a low risk of deforestation, then no certification scheme is required. **2.** If the ingredient is from a region with a high risk of deforestation, it must be purchased through a certification scheme which verifies no deforestation has occurred before a defined cut-off date(s). See Appendix II for acceptable schemes. **Soy and oil palm ingredients in Class A must be in a physically segregated supply-chain from ingredients defined in Class B, C & D.**	Nutreco's soy and oil palm ingredients are deforestation-free.
CLASS B	The soy or oil palm ingredient is traceable back to a country or region with a high risk of deforestation. **> See Appendix I**	If deforestation, then no certification If the ingredient is from a region with a high risk of deforestation, it must be purchased through a certification scheme with a defined cut-off date, using either a mass-balance or credit system. **> See Appendix III for acceptable schemes** **Soy and oil palm ingredients in Class B do not need to be segregated from ingredients defined in Class C & D.**	Nutreco supports the production of deforestation-free feed ingredients from soy and oil palm.
CLASS C	The soy or oil palm ingredient is traceable back to a country or region with a high risk of deforestation. **> See Appendix I**	If the ingredient is from a region with a high risk of deforestation, it must be purchased through a certification scheme that verifies no illegal deforestation has occurred. **> See Appendix IV for acceptable schemes** **Soy and oil palm ingredients in Class C must be in a physically segregated supply-chain from ingredients defined in Class D.**	The soy ingredient meets the FEFAC soy sourcing guidelines, e.g. no illegal deforestation has occurred In this defined Class, there are no acceptable schemes for oil palm ingredients, therefore no claims can be made.
CLASS D	The soy or oil palm ingredient is traceable back to a country or region with a high risk of deforestation or untraceable. **> See Appendix I**	If the ingredient is from a region with a high risk of deforestation, it can be purchased without any certification.	The soy and/or oil palm ingredient(s) can be traced back to their country-of-cultivation.

If different batches/regions of soy or oil palm are mixed, then the lowest class applies.

(A) – (D) describe all sourcing routes currently available. These are shown in order of preference.

Preferable source **<** ▮▮▮▮▮ **>** Less preferable source

Milestones

2021
By the end of 2021, Skretting is sourcing soy and oil palm ingredients from Low risk regions or High risk regions with certification verifying no illegal deforestation has occurred (Class C as a minimum).

2023
By the end of 2023, Skretting is sourcing soy and oil palm ingredients from Low risk regions or from High risk regions, under certification schemes that do not allow either legal or illegal deforestation using at least a mass balance or credit system (Class B as a minimum).

2025
By the end of 2025 Nutreco (and thereby its divisions Skretting and Trouw Nutrition) is only sourcing soy and oil palm ingredients from Low risk regions or from High risk regions that are free from legal and illegal deforestation, in fully segregated physical supply-chains under third party certification schemes (Class A only).

Additional milestones in specific areas may be set that allow us to achieve the objective earlier than the 2025 deadline; for example per specific soy or oil palm ingredient or for a certain animal/ fish species or for a certain region.

Responsible production of soy and oil palm is about more than deforestation and land-use change. We believe all agricultural products should be produced in a responsible manner.

For sourcing of all ingredients, our Nutreco **Code of Conduct** for Business Partners applies. For agricultural ingredients, an additional supplement also applies and for soy and oil palm, this Policy adds a further layer of responsibility to our sourcing.

Decision Tree

This decision tree applies for all soy and oil palm ingredients, including conventional and organic and where the soy or oil palm ingredient is part of a blend/mix.

Is the ingredient traceable back to the country-of-cultivation? — **NO** → ⚠️ **DO NOT PURCHASE!**

YES ↓

Is the ingredient traceable back to a country-of-cultivation with a low risk of deforestation?
> See Appendix I

NO → Can the ingredient be sourced under a fully physical segregated certification scheme documenting no deforestation – legal or illegal?
> See Appendix II — **YES** → Ingredient is purchased as **Class A**

YES ↓ | **NO** ↓

Is the ingredient in a physically segregated supply-chain?

NO → Can the ingredient be sourced under a certification scheme documenting no deforestation – legal or illegal, through use of mass-balance or credits?
> See Appendix III — **YES** → Ingredient is purchased as **Class B**

YES ↓ | **NO** ↓

Can the ingredient be sourced under a fully physical segregated certification schemes documenting no illegal deforestation?
> See Appendix IV — **YES** → Ingredient is purchased as **Class C**

NO ↓

Ingredient is purchased as **Class A**

Ingredient is purchased as **Class D**
> See Appendix V

Regions at high risk of deforestation

Appendix I

Soy Regions at a high risk level of deforestation

Angola
Argentina
Belize
Benin
Bolivia
Bosnia & Herzegovina
Brazil
Burkina Faso
Burundi
Cambodia
Cameroon
Ethiopia
Gabon
Kyrgyzstan
Lao
Liberia
Malawi
Mali
Moldova
Myanmar
Nepal
Paraguay
Rwanda
Sri Lanka
Tanzania
Togo
Uruguay
Zambia

A soy producing country not in the list above is considered to have a low risk of soy driven deforestation – for more background and the methodology used to make this list, **see Appendix VII.**

Oil palm Regions at a high risk level of deforestation

Brazil
Cameroon
Colombia
Côte D'ivoire
Ghana
Guatemala
Guinea
Honduras
Indonesia
Liberia
Malaysia
Mexico
Nigeria
Papua New Guinea
Peru
Philippines
Thailand
Venezuela

An oil palm producing country not in the list above is considered to have a low risk of oil palm driven deforestation – for more background and the methodology used to make this list, **see Appendix VII.**

Acceptable certification schemes

Appendix II Class A*

Soy	Oil palm
Belgian Feed Association (BFA)	RSPO (IP / segregated)
Certified Responsible Soya (CRS)	
Donau Soja	
Europe Soya	
ISCC Plus (segregated)	
ProTerra (segregated)	
RTRS (segregated)	
Sustainable Farming Assurance (SFA) – Non conversion	
Cerrado Conservation Mechanism Payment for Environmental Services (not yet available)	

***Class A:** The report by Profundo Research Institute (June-2019), titled **Setting the bar for deforestation-free soy in Europe** was used to define Class A.

Appendix III Class B

Soy	Oil palm
ISCC Plus (mass-balance)	RSPO (book & claim / mass-balance)
ProTerra (mass-balance)	
RTRS (mass-balance)	
RTRS (credits*)	

***Credits:** 1 tonne of soy, for example Roundtable on Responsible Soy (RTRS) - certified soy, is equivalent to 1 credit. When buying credits, we buy the amount of credits equal to the amount of soy product purchased. So 100 tonnes of soy protein concentrate (or any other soy product) equals 100 credits. Soy is processed into different products that all add up to one soy unit. By purchasing credits equal to the amount of products purchased, we take responsibility for our part of the soy value chain.

Appendix IV Class C

Soy	Oil palm
ADM Responsible Soy Standard	No certification schemes
Agricultura Certificada de Aapresid; Certified Sustainable Agriculture (ASC)	
Amaggi Responsible Standard	
Bunge Pro S	
Cargill Triple S	
Coamo Responsible Soy	
CSQA (Italian certification company)	
FEMAS	
Louis Dreyfus Company (LDC) program for Sustainable Agriculture	
Sustainable Feed Standard (SFS)	
Sustainable Farming Assurance (SFA)	
US Soy Sustainability Assurance Protocol (US SSAP)	

All standards listed in Class A-C comply with the FEFAC soy sourcing guidelines.

Appendix V Class D

- The soy or oil palm ingredient is traceable back to a country or region with a high risk of deforestation, without certification or not traceable at all.
- The soy or oil palm ingredient is offered under a scheme not mentioned in this Policy. Soy and oil palm products can be offered under a multitude of certification schemes. Many of these schemes deal with issues other than deforestation (organic, social issues, responsible agricultural practises with regard to soil erosion, use of pesticides). Although potentially valuable, this policy is focused on deforestation and land used change only
- For a soy or oil palm ingredient offered under a scheme not mentioned in this Policy, please check with the Skretting Sustainability Manager, before any commitments are made.

Definition — Deforestation

Appendix VI

Deforestation: Loss of natural forest as a result of conversion to agriculture or other non-forest land use:

• Conversion to a tree plantation
• Severe and sustained degradation

This is the 'official' definition from the Accountability Framework Initiative.

With regard to other non-forest land the ProTerra and Roundtable for Responsible Soy certification highlights; Primary Forests (for instance, rainforests): Riparian Vegetation, Wetlands, Swamps, Floodplains, Steep slopes, High above-ground carbon stocks, and other as defined by the High Conservation Values Resource Network (HCV 1 to 6);

• HCV 1 Species diversity
• HCV 2 Landscape-level ecosystems and mosaics
• HCV 3 Ecosystems and habitats
• HCV 4 Ecosystem services
• HCV 5 Community needs
• HCV 6 Cultural values

Illegal deforestation: refers to violation of governmental regulations and international conventions that pose limits on conversion of native vegetation to agricultural landDeforestation rates and risk.
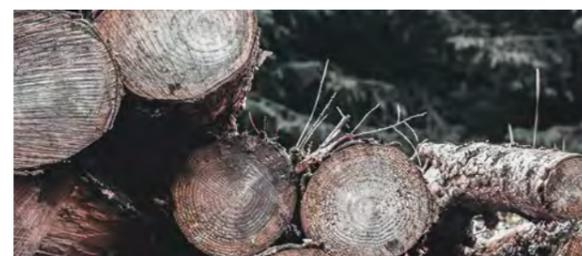
Deforestation rates and risk

It is important for Nutreco to map the geographical regions with the highest deforestation rates. We can assume that in areas with a high rate of deforestation, also the likelihood of illegal deforestation will be high.

A mapping of deforestation in different countries and regions will be a tool to:

• Give information about where the likelihood of illegal deforestation is high
• Give information about where we need additional assurance through certification schemes or supplier information that soy does not come from recently deforested land

Land conversion is the conversion of non-forested natural ecosystems to agriculture, tree plantations, intensive livestock production, or other land uses, as well as the severe or sustained degradation of such ecosystems (For example, drainage of peatlands or major alteration of grasslands due to livestock production).

In all countries – also those with a high deforestation rate – there will be agricultural land cleared many years ago. We can source soy and oil palm products from these areas. However, when we purchase from a geography with high deforestation, we need additional assurance that the products we buy do not come from recently deforested land or from any land cleared after a cut of date that has been defined by Nutreco.

Methodology

Appendix VII

In order to establish a risk map we have used data on carbon emissions resulting from the direct land use change by soy and oil palm cultivation.

The source of data is a complete dataset Direct Land Use Change Assessment Tool issued by Blonk consultants (version 2018) wfrom which we have extracted data for soy and oil palm cultivation. The results are based on the average FAO statistics (harvested area) of 2014-2016 and 1994-1996. It should be noted that the calculation does not take (organic) peat soils into account.

The Blonk tool that is used as a proxy, is a recognised and a comprehensive tool to assess greenhouse gas (GHG) emissions from direct Land Use Change (LUC), based on the PAS2050 Carbon Footprint standard and referenced for example by the European PEF method. The Blonk tool addresses GHG emissions caused by land transformation from forest, grassland and other types of cropland considering a 20 year time frame.

The values are country and crop-specific and based on the latest FAO data: For example the higher the forest contraction and the higher the expansion of land for the specific crop of interest in a country over the past 20 years, the higher the direct LUC emissions attributed to that crop and country.

The following steps were taken:

1. Filter the tool by crop of interest (For example soybeans or palm oil)
2. Sort countries by crop-specific LUC values from high to low

3. We defined a cutoff point between high risk and low risk at a LUC value of 1 [ton CO2-eq./tonne crop*yr]. This value was chosen when looking at other agricultural crops we purchase like wheat and rapeseed. In regions we source from – and do not demand any certification – we found values around 1 tonne CO2-eq./ton crop*yr . For these crops as of today we do not demand any certification.

When having a closer look at the Blonk database for land use change and data related to oil palm, doubts were raised over the accuracy of the dataset. So here we decided to focus on looking at the countries cultivating oil palm and the tree cover loss in these countries (Global Forest Watch. "Tree cover loss in compared to other areas". Accessed on 22/09/2020 from **www.globalforestwatch.org**). We then also consulted the Global Forest Watch global map regarding commodity-driven deforestation: Large-scale deforestation linked primarily to commercial agricultural expansion. This was partly a subjective evaluation as we were not able to extract subjective information.

Status

Although the data used and evaluation done is solid, in time the data and the methodology can no doubt be improved. Other sources of information could also be taken into account. For now this evaluation is seen as good enough to move forward to implement the policy, but a committee will be formed (potentially with external members) to review the document. It will be important looking for more detailed data that e.g. considers the main causes/drivers of deforestation in the countries where deforestation is relevant. In addition this type of risk assessment should be regularly updated. In due time this document will have to put in the context of the upcoming new Aquaculture Stewardship Council (ASC) feed standard certification and the upcoming GlobalGAP compound feed standard certification.

Sustainability.
It's not just what we aspire to do, it's what we do.