

# The nitrogen crisis in the Netherlands - Worksheet

The Netherlands is the biggest nitrogen polluter in Europe. To reach the goals of the Paris Agreement - zero emissions in 2050 - the country still has a long way to go. In the past 5 years, nitrogen emissions have been the topic of a fierce debate. Scientists and activists plead for a reduction of nitrogen, farmers and construction workers feel victimized, and the government is divided into two camps. In this exercise you will learn where nitrogen emissions come from, why nitrogen emissions have to be reduced and what solutions there are. In the next lesson you will take part in a debate concerning the nitrogen crisis as one of the stakeholders.

## 1.1 What do you know about nitrogen pollution?

Write down a few key words in the box below that come into mind when thinking of nitrogen pollution and the crisis in the Netherlands.

## 1.2 Why is nitrogen a topic of debate in the Netherlands?

Watch this video by the CBS that introduces the basics of the nitrogen crisis:

[https://www.youtube.com/watch?v=A4TfzZ\\_D7X4](https://www.youtube.com/watch?v=A4TfzZ_D7X4)

(turn on the subtitles for an English translation).

## 1.3 Worksheet

Now that you have been introduced to the problem, we'll dive deeper into the issue. There is a worksheet on the next page for you to fill in. Some examples have already been given to help you out. Try to fill in the worksheet as complete as possible, using many different and reliable sources. The worksheet has to be handed in at the beginning of the next lesson. There are several suggested sources below to get you started:

### Text resources (Dutch)

<https://www.biomaatschappij.nl/online-dossier/dossier-stikstof/>

<https://www.aanpakstikstof.nl/>

### Text sources (English)

<https://www.greenfish.eu/the-dutch-nitrogen-crisis/>

<https://storymaps.arcgis.com/stories/7eb3084097fc4f6593ab269fdde55c94>

<https://www.arc2020.eu/nitrogen-crisis-dutch-farmers-rage/>

### Video resources

Consequences of nitrogen pollution

[https://www.youtube.com/watch?v=ZvKXHQM6soo&ab\\_channel=OECD](https://www.youtube.com/watch?v=ZvKXHQM6soo&ab_channel=OECD)

Animated overview

[https://www.youtube.com/watch?v=2L2Bn\\_Sr82w&ab\\_channel=WageningenLivestockResearch](https://www.youtube.com/watch?v=2L2Bn_Sr82w&ab_channel=WageningenLivestockResearch)

General introduction (Dutch with automatic English translations)

[https://www.youtube.com/watch?v=UcDM80wf7-Q&ab\\_channel=UniversiteitvanNederland](https://www.youtube.com/watch?v=UcDM80wf7-Q&ab_channel=UniversiteitvanNederland)

Farmers protest (Dutch with automatic English translations)

[https://www.youtube.com/watch?v=FM3Ctir9tpY&t=87s&ab\\_channel=NOSop3](https://www.youtube.com/watch?v=FM3Ctir9tpY&t=87s&ab_channel=NOSop3)

Zondag met Lubach: Farmers protest & Nitrogen explanation (Dutch with UK translation)

[https://www.youtube.com/watch?v=7sNBUBInJo8&ab\\_channel=vprozondagmetlubach](https://www.youtube.com/watch?v=7sNBUBInJo8&ab_channel=vprozondagmetlubach)

**Stakeholders**

- Farmers

**Sources of nitrogen pollution****Primary sources**

-Agriculture (NH<sub>3</sub>)

**Secondary sources**

-High demand for dairy and meat

**Environmental & health consequences**

-Soil acidification

**Possible solutions**

-Less proteins in the food of cows

**Countermeasures and policies that already have been undertaken by the Dutch government**

-Assigning nitrogen space: a maximum amount of nitrogen that a farm or company can emit

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**Consequences of those policies**

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-Emissions trading between companies and industries / Cutting in the 'space' of agricultural sector to make 'space' for construction work

## 1.4 Nitrogen debate

In the next lesson you are going to step into the shoes of a stakeholder and participate in a debate regarding the nitrogen crisis.

The stakeholders that take part in the debate are:

- Ministry of Agriculture
- Ministry of the Interior (housing and construction regulations)
- Boeren Burger Beweging (BBB) (farmers)
- Commissie Remkes (scientists)

The teacher will facilitate the grouping of the class into the stakeholder teams.

The debate will cover the following dilemma:

Although scientists have advised to set the goal for nitrogen emissions to 50% reduction by 2030, the Ministry of Agriculture is about to sign a deal with new measures that aim to reduce the nitrogen emissions with 26% by 2030. The deal proposes to buy out farmers near Natura 2000 areas and change the norms for proteins in livestock food. The amount of nitrogen emissions that are reduced by these measures will be used for 70% to create 'nitrogen space' to emit nitrogen elsewhere, and for 30% to restore nature. The 'nitrogen space' is used for construction work so that the country can continue to build houses, infrastructure and windparks. With this deal, the farmers and scientists are not happy, but the Ministry of Agriculture and the construction workers are. Are there alternatives that have been overlooked? Should there be more restrictions in the deal or less restrictions?

Source: [https://www.tweedekamer.nl/kamerstukken/plenaire\\_verslagen/kamer\\_in\\_het\\_kort/kamer-spreekt-over-stikstof-en-natuurherstel](https://www.tweedekamer.nl/kamerstukken/plenaire_verslagen/kamer_in_het_kort/kamer-spreekt-over-stikstof-en-natuurherstel)

## 1.5 Preparation for the debate

In the debate you and your team will have to address the nitrogen crisis from the perspective of a particular stakeholder using their ideals, values and interests. To prepare for the debate, it is suggested to read and watch different sources and fill in the worksheet as complete as possible. You can do this by yourself, but it is also a good practice to discuss the standpoints with your team to align your arguments. Moreover, answering the following questions from the perspective of that particular stakeholder can help you to step into their shoes:

- What do I want? What do I believe?
- Why do I want that? Why do I believe that?
- What arguments are in favour of my stance?
- What arguments are against my stance?
- Do my opponents want the same? Why (not)? Do my opponents believe the same?
- How can this crisis be solved?

## 1.6 The nitrogen debate

At the start of the next lesson you will get 10 minutes to gather with your team of stakeholders and discuss your strategy and formulate an opening statement. At least one person in your team will have to take notes of what the other stakeholders are arguing so that your team can formulate an appropriate rebuttal. Also one person will be appointed as fact-checker, to check the claims of the other teams (on a laptop). After that the debate will kick off and every team takes turns in formulating their statements and ideas. The teacher will facilitate the debate as the chairperson.

Every team is allowed to make an opening statement. After 20 - 30 minutes of debating, the debate ends and a winning party is chosen by the chairperson.