

# N<sub>r</sub> management in current Brazilian policies

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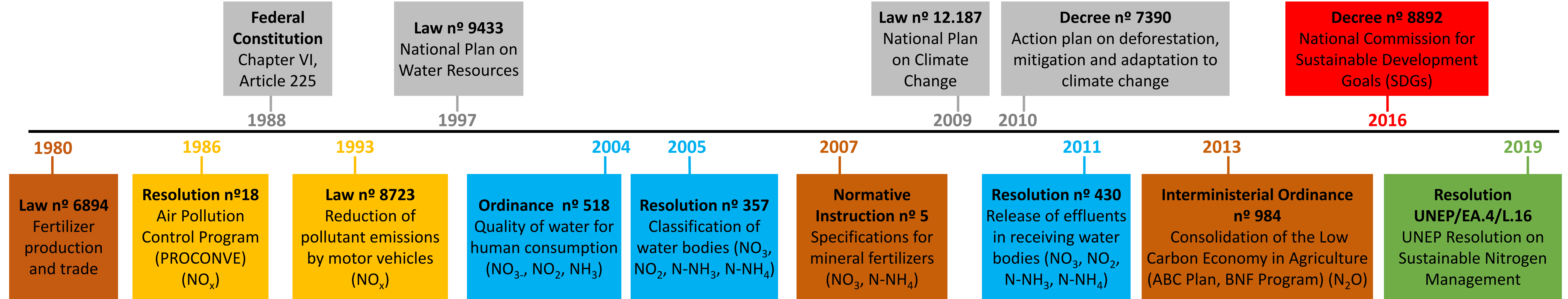


Nitrogen input from human activities escalated significantly in Brazil from 1970 to 2015: emissions of nitrous oxide (N<sub>2</sub>O), ammonia (NH<sub>3</sub>), and nitrogen oxides (NO<sub>x</sub>) together have increased about 350% in the period (Source: EDGAR Dataset <https://edgar.jrc.ec.europa.eu/>).

N<sub>r</sub> emissions are mainly related to agricultural practices and use of fertilizers, unmanaged animal waste, land-use change associated with biomass burning, increasing fossil fuels use, and lack of basic infrastructure for sewage treatment.

To date, there are no specific, exclusive or integrated policies to regulate N<sub>r</sub> emissions in Brazil. We present a list of federal policies that somewhat include N species in their regulations, as well as major environmental plans.

We highlight the ABC Plan (2013), which provides low-interest loans for a set of sustainable agricultural practices, including a special program for Biological Nitrogen Fixation (BNF). Despite the success of the BNF program, Brazil may lose the momentum to foster better N management practices soon, due to its current economic and political issues.



## HIGHLIGHTS

- The continuous conversion of deforested areas to agriculture may compromise the positive outcomes from the ABC Plan by enhancing GHG emissions from deforestation and N compounds later through intense soil fertilization to increase crop production.
- The energy, transport, and industrial sectors are the largest sources of NO<sub>x</sub> emissions in the country, however there is a lack of integrated policies targeting these sectors.
- An international binding instrument on nitrogen, via the UNEP Resolution, would be essential to develop and foster policy strategies for the sustainable N management in Brazil.

- Environmental Plan
- Environmental Plan - Revoked in 2019
- AIR-focused policy
- WATER-focused policy
- SOIL-focused policy
- International Resolution

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