



Brazil

The first legislation on the control of air pollution at the Federal level in Brazil was the Ordinance of the Ministry of Interior No. 231 of 27 April 1976, which aimed to establish national air quality standards. The States are allowed to make their own environmental laws, which can be more stringent than Federal laws.

The National Environment Council (Conselho Nacional do Meio Ambiente (CONAMA, *see* <http://www.mma.gov.br/port/conama/>) was established in 1981, and is responsible for regulating environmental law (including the establishment of standards) in Brazil. The National Programme for Control of Air Quality (PRONAR) was introduced in CONAMA Resolution No. 5 of 15 June 1989 (available, in Portuguese, at <http://www.mma.gov.br/port/conama/legiabre.cfm?codlegi=81>). This programme was introduced to promote the control of air pollution by establishing strategies for setting national standards on air quality and emissions, formulating policies on air pollution prevention, implementing the national network for air monitoring, and pollutants inventories. As part of the provisions of PRONAR, two nationwide air quality standards (primary and secondary air quality) were set, as well as the sampling methods and the air quality levels, through CONAMA Resolution No. 3 of 28 June 1990 (<http://www.mma.gov.br/port/conama/legiabre.cfm?codlegi=100>).

Emission standards for new combustion plants were set out in CONAMA Resolution No. 8 of 6 December 1990 (discussed below). Emission standards for industrial stationary sources are given in CONAMA Resolution No. 382 of 26 December 2006 (available, in Portuguese, at <http://www.mma.gov.br/port/conama/legiabre.cfm?codlegi=520>), and in CONAMA Resolution No. 436 of 22 December 2011 for industrial stationary sources that were installed or had applied for a license before 2 January 2007 (available, in Portuguese, at <http://www.mma.gov.br/port/conama/legiabre.cfm?codlegi=660>). These two industrial resolutions include limits for air pollutants from boilers burning fuel oil, natural gas and biomass, but not for coal.

National emission standards for new combustion plants burning coal

The emission standards for new combustion plants are given in CONAMA Resolution 8/1990, available at <http://www.mma.gov.br/port/conama/legiabre.cfm?codlegi=105> (in Portuguese). An English translation can be found in the publication *Resoluções do CONAMA 1984–2012*, published by the Ministry of the Environment, and available at <http://www.mma.gov.br/port/conama/processos/61AA3835/CONAMA-ingles.pdf>. The standards were published in the Official Gazette on 28 December 1990, Section 1, 25539, and are effective from this date. The emission limits vary according to the plant capacity and the PRONAR classification of the intended uses of the various areas.

Area	Capacity, MW	Total PM, g/million kcal	SO ₂ , g/million kcal	Opacity
Class I	≤70	installation of new air polluting plants are banned		
Class II and III	≤70	1500	5000	20% of the equivalent of the Ringelmann 1 scale
Class I	>70	installation of new air polluting plants are banned		
Class II and III	>70	800	2000	20% of the equivalent of the Ringelmann 1 scale

Notes:

1. The emission limits are expressed in weight of pollutant by the higher calorific value of fuel.
2. Class I areas are air preservation areas, such as National State Parks, tourism areas, mountain resorts, and mineral and hot-spring spas.
3. Class II areas are areas where air quality deterioration is limited by the Secondary Air Quality Standard, known as conservation areas.
4. Class III areas are development areas where air quality deterioration is limited by the Primary Air Quality Standard.
5. It is up to the state environmental organisations to propose to their respective governments the framework of their Class I, II and III areas, as provided by CONAMA Resolutions 5/1989 and 3/1990.
6. Some states have established emission standards for coal-fired power plants that are more stringent than the federal one.

This paper reflects the IEA CCC understanding of the relevant legislation and is not a substitute for the official version. The IEA CCC does not guarantee the accuracy of the data included in this paper and accepts no responsibility for any consequences of their use.

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