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Title: **Brazilian wetlands on the brink**

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Wetlands harbor a huge amount of biodiversity, provide essential services, and are key regulators of climate change (notably peatlands) (MA 2005). Brazil not only hosts the world's richest freshwater aquatic biota (Padial et al. 2017) but also leads in wetland area and peatland volume in the tropics and subtropics (Gumbricht et al. 2017). In 2012, controversial revisions to Brazil's "Forest Code", now renamed the "Native Vegetation Protection Law" (hereafter NVPL; Federal Law nº 12,651/2012; http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2012/lei/l12651.htm), imposed catastrophic risks to wetlands. The reform was catalyzed mainly by the agribusiness sector, which argued that the Forest Code was too restrictive in the face of an alleged need for agricultural expansion (Metzger et al. 2010). However, this argument has been strongly contested by multiple studies (e.g., Soares-Filho et al. 2014; Strassburg et al. 2014; Brancalion et al. 2016). The question now is how to minimize the setbacks.

Riparian wetlands can now be cleared because the NVPL changed the basis for delimiting "buffer zones" (legally considered "Permanent Preservation Areas"; hereafter PPAs) from the maximum water level to the regular bed of watercourses, thus removing protection from many riparian areas, especially from the vast floodplains with high-amplitude flood pulses in Amazonia (Souza et al. 2011). Ponds <1 ha and wetlands adjacent to intermittent springs and ephemeral streams lost their legal protection. These habitats are also threatened by destruction (Brancalion et al. 2016; Grasel et al. 2018). The same goes for large tracts of salt marshes and hypersaline areas, which can now be used for shrimp farming and salt exploitation, also threatening associated mangroves (Rovai et al. 2012; SBPC and ABC 2012). Other setbacks include dramatic reduction of required restoration of PPAs cleared before 22 July 2008 (Brancalion et al. 2016), allowing 50% of any required restoration of PPAs to be done with exotic woody species, and permitting aquaculture in most cleared PPAs.

Among other consequences, setbacks associated with the NVPL may substantially increase greenhouse gas emissions (Moomaw et al. 2018), cause a massive loss of native species (Metzger et al. 2010; Volcan and Lanés 2018), introduce alien taxa (Pelicice et al. 2017), and jeopardize vital ecosystem services (MA 2005). However, Brazil now has a valuable opportunity to rescue its wetlands and so sustain its international treaties and its leadership in conservation. Although in force since 2012, the NVPL's 'regulation' (setting of rules to implement a law) is still in progress at the state level, where its setbacks can be attenuated through adoption of more rigorous policies. We urge policymakers and scientists to engage in open dialogue on this critical 'regulation'.

Compliance with ethical standards The authors declare compliance with all ethical standards.

Conflict of interest The authors declare that they have no conflict of interest.

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