

Table S1. Main legal framework for groundwater governance in the Azores archipelago (EU—EU legislation; NL—national legislation; RL—regional legislation).

Key Date	Main Achievement	Objectives	Origin
6 th May 1986	Establishes protection measures to thermal springs in Furnas (Regional Resolution 63/86, latter amended by the Resolution 99/2010)	Defines a set of measures in order to safeguard thermal water discharges in Furnas village (São Miguel island), to prevent deterioration of water quality and ensure further therapeutic usage in the future	RL
3 th September 1997	Adaptation of the EU Nitrates Directive to the national legislative framework (Decree-law 235/97, latter amended by the decree-law 68/99)	Prevents water pollution by nutrients through identification by each member state of the Nitrate Vulnerable Zones (NVZ) and the application of Good Agricultural Practices; the latter are applied in a voluntary basis, but for the NVZ are complemented by compulsory action programmes. In the Azores there are 8 NVZ defined, all associated to eutrophic lakes	NL
1 st August 1998	Water quality normative (Decree-Law 236/98)	Establishes the recommended and permissible values for groundwater to be appropriated for human consumption (the normative framework for the water quality for human consumption is established by the Decree-law 243/2011, from 5 th September 2001, latter amended by the Decree-laws 306/2007)	NL
22 st September 1999	Legislation on wellhead protection areas (Decree-Law 382/99; latter followed by the Ordinance 702/2009, from 6 th July 2009)	Protection of groundwater abstracted to human supply through the adoption of three areas (enlarged, intermediate and close) surrounding wells or springs with a discharge higher than 100 m ³ /day or serving more than 500 people (specific criteria were adopted latter in the Azores through the Regional Legislative Decree 10/2016/A, from the 16 th June 2016)	NL/RL
23 st October 2000	Adoption of the Water Framework Directive (Directive 2000/60/CE)	Establish a common framework to an integrated management of water resources in the EU, with implications for the protection and conservation of groundwater through a set of general provisions	EU
19 th March 2003	Defines the vulnerable zones in the Azores (Ordinance 258/2003, latter amended by the Ordinance 1100/2004)	Delimitation of the vulnerable zones according to the EU Nitrates Directive in Portugal, including eight vulnerable zones in the Azores, all corresponding to lake watersheds (the most recent action plans for those zones are dated from 2006; ordinances 46/2006 and 47/2006)	NL
23 st April 2003	Adoption of the Azores Regional Water Plan	First integrated water resources planning exercise in the Azores, with 54 aquifer systems being identified and characterized	RL
15 th November 2005	Establishes the ownership framework for water resources (Law 54/2005, latter amended by the Laws 78/2013 and 34/2014)	Excludes groundwater from the public domain, except under public land	NL
29 th December 2005	Adaptation of the EU Water Framework Directive to the national legislative framework (Law 58/2005); latter was followed by the Decree-Law	The same of the EU Water Framework Directive	NL

12 th December 2006	77/2006 Adoption of the EU Groundwater Directive (Directive 2006/118/EC)	Following the EU Water Framework Directive, the Directive 2006/118/EC establishes specific measures to prevent and control groundwater pollution.	EU
31 th May 2007	Establishes a new framework to the appropriation of water resources through permits (Decree-Law 54/2005)	Regulates the process to be allowed to abstract groundwater (artificial recharge and injection are also regulated).	NL
15 th October 2007	Detailed description of the permit allowance process in the Azores (Ordinance 67/2007)	Comprehensive description of the data that any groundwater user needs to fulfil in advance and after any drilling to get a permission (such as depth, well design, groundwater chemistry, pumping tests)	RL
19 th October 2007	Establishes the delimitation of the Azores River Basin District (Decree-Law 347/2007)	Delimitation of the 10 river basin districts in Portugal according to the EU Water Framework Directive and the Law 58/2005	NL
28 th October 2008	Adaptation of the EU Groundwater Directive to the national legislative framework (Decree-Law 208/2008)	The same of the EU Groundwater Directive	NL
29 th September 2009	Establishment of the criteria for the evaluation and monitoring of the quantitative status of groundwater bodies (Ordinance 1115/2009)	Procedures defined following the EU Water Framework Directive and the Law 58/2005 requirements	NL
9 th April 2010	Preventive measures in the hydrogeological basin of Caldeira Guilherme Moniz (Regional Legislative Decree 15/2010/A)	Establishes a set of measures in order to safeguard aquifer recharge through the prohibition of constructions and deforestation, as well as the limitation of other activities such as agriculture and non-metallic mineral resources exploitation	RL
31 st May 2012	Approves the protection areas for all springs and wells appropriated for human consumption in the Azores (Regional Ordinance 61/2012)	Following the Decree-Law 382/99, sets the protection areas for groundwater sources for human supply	RL
16 th October 2012	Threshold values for pollutants and groups of pollutants (Regional Ordinance 106/2012)	Defines the threshold values for the evaluation of the chemical status of groundwater bodies in the Azores River Basin District according to the EU Groundwater Directive	RL
27 th March 2013	Adoption of the first River Basin Management Plan for the Azores River Basin District (Resolution from the Azores Regional Government 24/2013)	Accomplishes the first planning cycle for the Azores River Basin District according to the EU Water Framework Directive and the Law 58/2005 planning scheme	RL
4 th July 2014	Approves the protection areas for one well (Regional Ordinance 43/2014)	Set the protection areas for one well located in São Miguel island according to the Decree-Law 382/99	RL
6 th February 2017	Adoption of the second River Basin Management Plan for the Azores River Basin District (Regional Decree Law 1-A/2017/A)	Accomplishes the second planning cycle for the Azores River Basin District according to the EU Water Framework Directive and the Law 58/2005 planning scheme	RL
