



Autonomous Region of the Azores
Regional Secretariat for the Environment and Climate Change

LIFE IP Azores Natura (LIFE17 IPE/PT/000010)

Progress Report

covering the project activities of sub-action C4.2

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GOVERNO
DOS AÇORES

Secretaria Regional do Ambiente
e Alterações Climáticas



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1. Technical part

1.1. Action C4 – Implementation of integrated best practice works for habitats

1.1.1. Sub-action C4.2 – Pilot for ecological corridor implementation

This sub-action stipulates the implementation of pilot works directed at improving the functionality of ecological corridors within N2000 areas through the restoration of degraded HD *habitats* (including some priority habitats). The aim is to create a green and blue infrastructure on Terceira Island, involving the integrated planning of restoration activities in terrestrial and freshwater *habitats*, thus promoting the provision of ecosystem services in these areas. Within the frame of this sub-action, a corridor between the intervention areas Lagoa do Negro, Furnas do Enxofre and Terra Brava will be defined and restored, thereby increasing the connectivity between these two mosaic areas.

Planning of the specific tasks commenced in January 2020, when the Technical Assistant to the Project Manager was contracted. As a first step, the intervention areas were visited, and Operational Programs were subsequently devised per intervention area. The concrete pilot works implemented in each of the intervention areas targeted by this sub-action vary according to the threats/issues encountered in each area. The present report will describe the activities carried out up until 31 April 2022, which have focused on the Lagoa do Negro intervention area, including mapping of all interventions.

Lagoa do Negro

To begin with, waste resulting from agricultural activity was removed, including household appliances, iron drums and old tubs that served as watering troughs for cattle. In August and September 2021, two wooden gates were installed to block access of unauthorised vehicles and to prevent cattle from crossing into the peatland areas (Figure 1).

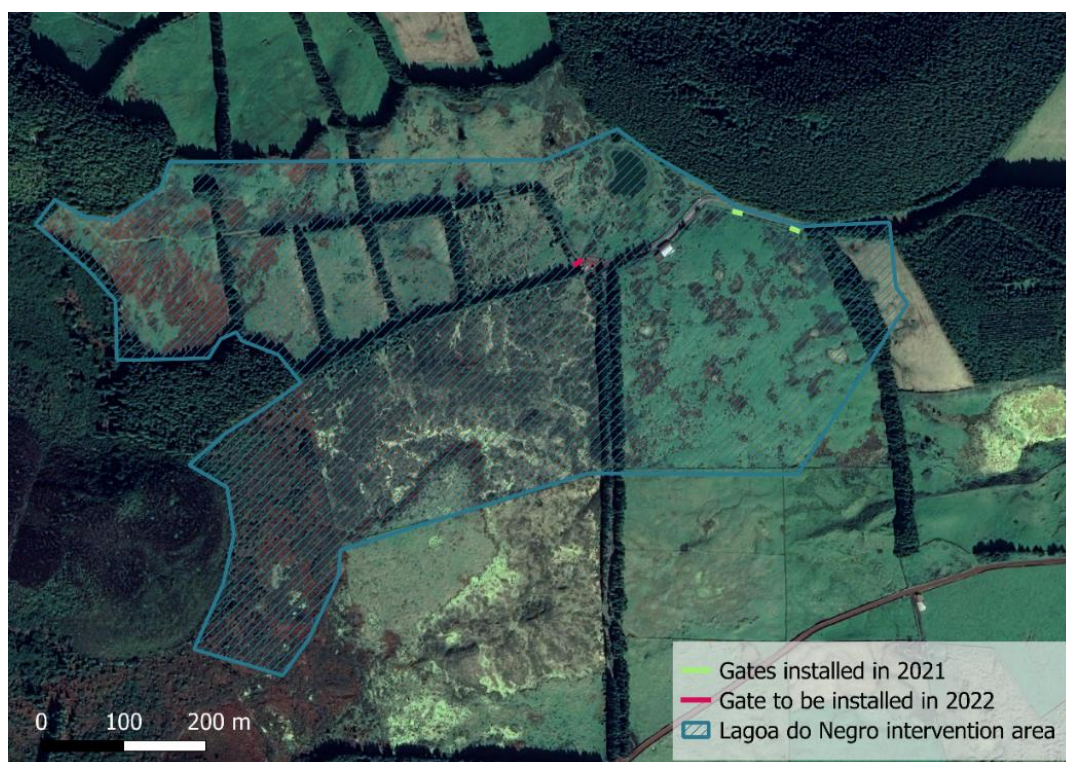


Figure 1. Gates in the Lagoa do Negro intervention area, Terceira Island.

Between March and September 2021, a total of 9 439 individuals of the exotic species *Cryptomeria japonica* and 30 individuals of the tree fern *Cyathea cooperi* were cut or killed using the drill & inject method, and the invasive species *Rubus ulmifolius* and *Hedychium gardnerianum* were removed from an area of 5,8 hectares and 0,5 hectares, respectively. The total intervened area, with respect to the removal of invasive species, has a size of 9,1 hectares (Figures 2-4).

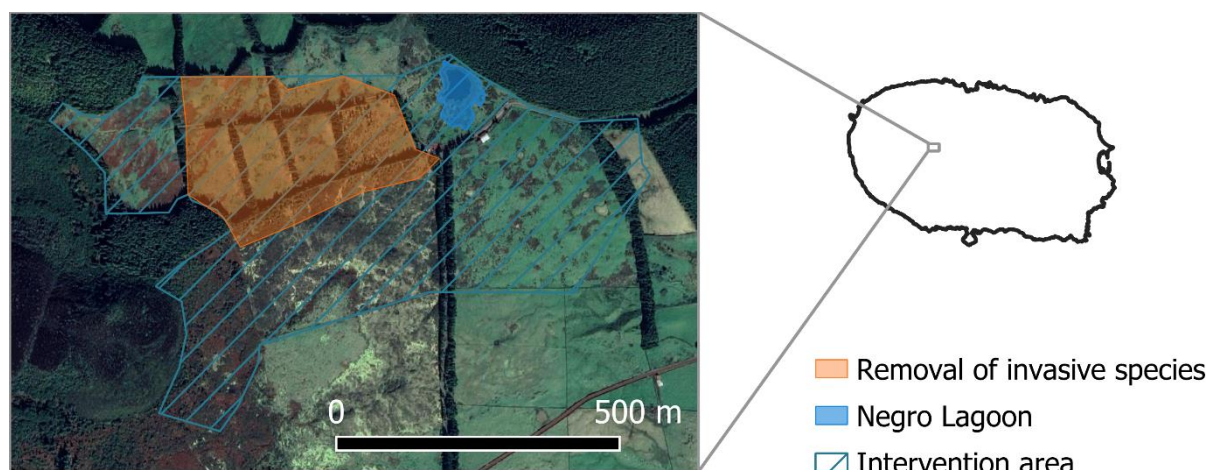


Figure 2. Mapping of control interventions in the Lagoa do Negro intervention area, Terceira Island, 2021.



Before: green areas of *Rubus ulmifolius*, May 2020



After: brown areas of cut/sprayed *Rubus ulmifolius*, September 2021



Before: green areas of *Rubus ulmifolius*, June 2020



After: brown areas of cut/sprayed *Rubus ulmifolius*, September 2021

Figure 3. Before (2020) and after (2021) the invasive species control interventions in Lagoa do Negro, Terceira Island.



Figure 4. Aerial photo of the area where *Cryptomeria japonica* was killed using the drill & inject method.

Trials to reintroduce *Sphagnum* sp. into pastures were carried out during the volunteer camp in March 2021 (action E5) by transplanting plugs of *Sphagnum* sp.; however, the plots had not been fenced and were subsequently destroyed by rabbits. In March 2022, the planting of 320 individuals of *Prunus azorica*, which have been propagated using *in-vitro* tissue cultures from Terceira’s natural population of this species, and 80 individuals of *Ilex azorica*, propagated in the nursery of the island’s Forestry Service. Individual plant protectors were used to safeguard the plants from rabbit herbivory. Ninety participants carried out this planting work within the frame of the international event “Trees of the World” (Figure 5).



Figure 5. Planting activity in the Lagoa do Negro intervention area within the frame of the international event “Trees of the World”, Terceira Island, 19 March 2022.

To increase the waterlogging of the peat bog, *Cryptomeria japonica* planks were installed to block water drains in September 2021. In January 2022, a water drainage tunnel was cleared out, thereby allowing the water to flow into the Negro lagoon from the surrounding terrain.

Seeds for the propagation of *Calluna vulgaris* were collected in the intervention area in October 2021, with the aim of returning the propagated material to its source area.

2. Overall progress of sub-action C4.2

Overall progress of the implementation of sub-action C4.2 is well within the timeframe defined in the project, and so far, all due milestones and deliverables have been achieved (Table 1).

Table 1. Milestones and deliverables for sub-action C4.2.

Milestone	Due date	Achieved
Creation of first accesses to the intervention area	31/12/2019	✓
1 st habitat restoration activity implemented	31/12/2020	✓
All cattle fences placed	31/12/2023	
All <i>Cryptomeria japonica</i> and <i>Eucalyptus</i> ssp. within sub-action intervention area removed	31/12/2024	
Deliverable	Due date	Achieved
Intermediate report	31/12/2021	✓
Detailed and specific mapping of all interventions	31/12/2021	✓
Intermediate report	31/12/2025	
Final report	31/12/2027	

The first milestone (1st habitat restoration activity implemented) was achieved with 3 months delay in March 2021. The present report constitutes the first intermediate report describing the developments in the implementation of this sub-action and the associated results (deliverable D90), including the detailed and specific mapping of all interventions (deliverable D91).

Table 2 illustrates the actual progress of the implementation in relation to the proposed timeframe.

Table 2. Gantt-chart illustrating overall progress of sub-action C4.2.

Action		2020				2021				2022			
		1T	2T	3T	4T	1T	2T	3T	4T	1T	2T	3T	4T
C4.2	Foreseen												
	Executed												

Legend:

	Defined period in application
	Delayed, without repercussions
	Implementation according to plan