

Annex 4: Detailed description of land management practices

Study site	Land management practice	Description of land management practice
Por_1 (Varzea)	Post-fire conservation logging	<i>Post-fire conservation logging – the cutting of pine trees, extraction of the trunks (wood) and their subsequent transport out of the area, piling up of logging residues in strips perpendicular to the contour lines and conditioning of the movement of the machinery to zones parallel to the residue piles; apparently this form of logging was agreed with some logging companies as alternative to the post-fire traditional logging in an attempt to minimize the damage of the machinery to the regenerating pine trees.</i>

<p>Por_2 (Varzea)</p>	<p>Post-fire traditional logging</p>	<p><i>Post-fire traditional logging – the cutting of pine trees, extraction of the trunks (wood) and their subsequent transport out of the area, and leaving logging residues on the forest floor.</i></p>
<p>Spa_2 (Ayora)</p>	<p>Selective forest clearing to prevent large forest fires</p>	<p><i>Selective forest thinning to prevent large forest fires. Thinning dense pine~forests are the prevention of fires by reducing the fuel load and its continuity, and to improve pine regeneration by eliminating the competition between different species.</i></p>

<p>Spa_2 (Ayora)</p>	<p>Cleared strip network system (firebreaks) for fire prevention</p>	<p><i>Cleared strip network system (firebreaks) for fire prevention. A firebreak is a strategically located strip on which the vegetation cover has been partially or totally removed down to mineral soil with the aim of controlling the spread of large forest fires. The main purposes are 1) to interrupt the continuity of hazardous fuels across a landscape to decrease the area affected by fires, 2) to provide areas where fire fighters are protected and can work more efficiently, 3) to slow down a fire, to reduce the fire intensity and caused damages, and 4) to provide strips where fuel management is facilitated.</i></p>
<p>Spa_2 (Ayora)</p>	<p>Afforestation with Pinus halepensis after fire</p>	<p><i>Afforestation with Pinushalepensis after fire. The planting holes (40x 40x 40cm) were created with a machine (Caterpillar) using a spoon to open a hole and cover it again. Did not use a ripper, they knew that the soil is destroyed using this technique. The seedlings were planted manually by the forest workers and arranged linearly because this facilitated the handling of the machines. Since the soil had a low stone content, it was suitable for the establishment of a forest</i></p>

Spa_3 (Ayora)	Clearing of fire-prone seeder species.	<p><i>Clearing of fire-prone seeder species.</i></p> <p><i>Selective clearing of fire-prone shrubs (fuel control) for reduce the fuel load and its continuity. This technique reduces shrubland flammability and improves vegetation recovery after a fire event</i></p>
Spa_3 (Ayora)	Planting of fire resistant resprouter specie	<p><i>Planting of more fire resistant resprouter species. planting of more resistant resprouter species can increase the resilience to fires and other disturbances such as drought events. Late-successional species entail lower availability of standing dead fuel</i></p>
Gre_1 (Messara)	Grazing land afforestation with carob trees	<p><i>A stand of Ceratonia siliqua (carob trees) is established within an area used for grazing. Once established and after 10 years, grazing can continue with few limitations.</i></p>
Gre_1 (Messara)	Controlled grazing in spring months and tree protection	<p><i>Grazing is controlled through fences and with species selection. Goats are banned from the area; smaller trees are protected; Grazing is avoided in February and March</i></p>

Cyp_1 (Randi)	Fodder provision to goats and sheep to reduce grazing pressure on natural vegetation	<i>Fodder provision to goats and sheep to reduce grazing pressure on natural vegetation. Shepherds provide fodder inside the farm keeping reducing the grazing of the animals</i>
Cyp_1 (Randi)	Planting Carob and olive trees to prevent erosion	<i>Shepherds and/or farmers plant dry resistance plants such as carob and olive trees in order to increase their income and improve the soil quality and structure</i>
Cyp_1 (Randi)	Carob tree protection from rats	<i>Carob tree owners are protecting their carob trees from rat attacks by covering the trees trunk with a thin aluminium layer. This way the rats are not able to climb the tree and cause problems to the branches or the fruits.</i>
Ita_1 (Castel Saraceno)	Metallic fences to regulate grazing	<i>Metallic fences are built around the pastures to limit the shepherd's property and reduce cattle dispersal. The fence can be built with various techniques, including electric fences.</i>

<p>Spa_1 (Albatera)</p>	<p>Multi-specific plantation of semiarid woody species on slopes</p>	<p><i>Plantation of seedlings of a variety of native woody species, mostly shrubs (e.g., Pistacia lentiscus, Rhamnus lycioides), using deep (60cm depth) planting holes. Microcatchments for water harvesting were established up slope the planting hole in suitable areas. Seedlings were protected from extreme radiation and predation by biodegradable seedling shelters. The management practice was implemented in 2006-07.</i></p>
<p>Spa_1 (Albatera)</p>	<p>Spatially- diverse multi- specific plantation</p>	<p><i>Spatially-diverse multi-specific plantation Plantation of seedlings of a variety of native woody species, mostly shrubs (e.g., Pistacia lentiscus, Rhamnus lycioides, Olea europaea var sylvestris, Quercus coccifera, ceratonia siliqua, Pinus halepensis), using deep (60cm depth) planting holes and adjusting plant species and field treatments to the characteristics of each landscape unit in the target area. Treatments varied between landscape units and included water-harvesting microcatchments; planting trenches (300 x 60 x 60 cm); seedling protectors (treeshelter); organic amendment; and mulch. This practice was implemented in 2003-04.</i></p>

Spa_1 (Albatera)	Multi-specific plantation of semiarid woody species on terraces with stone walls in ravines and gullies	<i>Technology implemented on ravines and gullies in a degraded semiarid mountain range. The restoration technology consisted of a plantation of seedlings of a variety of native woody species, mostly shrubs, on terraces with stone walls. Using planting holes, one or two rows of seedlings were established on each terrace; seedlings were protected from extreme radiation and predation by biodegradable seedling shelters. This practice was implemented in 2006-07.</i>
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