LIFE 16 CCA/IT/ 000011

Desert-Adapt - Preparing desertification areas for increased climate change

List of Adaptation Measures (AMs)

N.	Measure	More details	Cost to implement
1	Seed collecting	Genetic selection: collecting seeds from selected trees or plants that behave well under climate changes.	➡️
2	Cut seedlings (twigs)	Creating own nursery using own resources, developing roots on twigs, taken from best genetic sources (that do well under climate change).	➡️
3	Existing vegetation	Preferably just cut (with shredder) the existing vegetation instead of completely removing it to reduce carbon loss.	➡️
4	Mycorrhizae & plants	Inoculation of planting materials makes them more resilient to droughts, diseases and increases root surface. Using them also to produce mushrooms.	⬆️
5	Mycorrhizae & soils	Addition of mycorrhizae to soil improves crop resistance and nutrient availability.	➡️
6	Animal traction	Protecting soil, using animal tractions only when there are dangers for soil compaction or erosion and save on fuel.	⬆️
7	Swales	Establishing swales on lands to improve water infiltration and avoids soil erosion.	⬆️
8	Keylines	Establishing keylines on lands to improve water infiltration and avoids soil erosion.	⬆️
9	Half-moons	Establishing half-moons on lands to improve water infiltration and avoid soil erosion.	⬆️
10	Soil ripping	If soils are compacted, soil ripping creates planting space, reduces compaction and improves water infiltration.	➡️
11	Conservation Tillage	Using specialized ploughs and equipment to reduce soil compaction, evaporation and loss.	➡️
12	Ridge and furrows	Using a roman plough to create ridge and furrow, to improve water infiltration, and to avoid both soil erosion and carbon loss.	➡️

13	Capture & Store Water	Creating of artificial ponds, small lakes to make available water throughout the year and to increase wildlife.	⬆ (red)
14	Organic fertilizer	Addition of organic fertilizers to improve soil texture and moisture, and availability of nutrients, with a low climate impact.	➡ (yellow)
15	Pasture improvement	Improving pasture resilience and fodder quality by introducing (seeding) additional species (legumes).	➡ (yellow)
16	Seeding (annuals)	Covering soil with annuals between rows of trees is important to reduce temperature and radiation damage to soils.	➡ (yellow)
17	Legumes	Legumes cultivation adds nitrogen, improves soil texture and availability of moisture and nutrients.	➡ (yellow)
18	Cover crops	Covering bare soil to retain moisture, organic matter and to prevent weeds and soil erosion.	➡ (yellow)
19	Nurse shrubs	Planting tree seedlings inside shrubs to protect them from predation and weather exposure.	➡ (yellow)
20	Planting density	Setting the adequate planting density and plant species taking into account shadow, moisture, available nutrients and water and climate projections.	➡ (yellow)
21	Plant hole digging	Selective digging of holes to avoid large-scale soil disturbance. Select: by hand, machines, cross-ripping etc.	⬆ (red)
22	Interplanting	Iterplanting in existing vegetation improves biodiversity, ecosystem resilience, protects seedlings, prevents soil erosion.	⬆ (red)
23	Planting in mixes	Planting by combining species that are mutually beneficial to improve productivity. Mosaic management and landscape diversification are key words.	⬆ (red)
24	Regular planting	Planting in rows, patched or blocks thinking what fits best the local circumstances.	⬆ (red)
25	Natural fence	Multi-purpose natural fence to protect crops and provide food, fodder and shelter for biodiversity.	➡ (yellow)
26	Plant support	Planting seedling in cocoons, coco mats, to improve their survival rates under harsh environmental conditions.	⬆ (red)
27	Watering/Drip irrigation	Introducing drip irrigation/watering to save water.	⬆ (red)
28	Plant protectors	Using plastic sheets, wooden or metallic wire (e.g. cactus model) to protect plants from predation.	⬆ (red)
29	Plant assist	Using wood chips, rocks or other available cover material around seedlings to protect against weed and to improve soil moisture and fertility.	⬆ (red)

30	Fencing installation	Protecting seedlings against livestock or wildlife and improve natural regeneration.	⬆
31	Grafting trees	Using resistant rootstock with productive fruit to improve overall resilience and productivity.	➡
32	Diseased trees	Removing when required to avoid cross-contamination.	➡
33	Weed control	Implementing Propelled Abrasive Grit Management (PAGMan). It uses grit (a waste product) to blast away small weeds in the rows, avoiding chemicals.	➡
34	IPM Plague control	Developing an Integrated Pest Management (IPM), to carry out insect & plague control on eco-friendly way. Providing shelter/host plants for predator insects.	➡
35	Trash Lines	Stacking the prunings in rows to collect water and improve biodiversity (*e.g.* Hugelkulture technique). Chipping is also possible.	➡
36	Livestock breeds	Selecting local breeds and improving of feed-to-weight ratio to save on expenses.	⬆
37	Livestock Grazing	Implementation of Holistic Planned Grazing: moving herds between fields to promote pasture regrowth and combine multiple types of livestock.	➡
38	Ecoservices	Identify and valorize all the natural services that can create added value.	➡
39	Biodiversity	Increase biodiversity of wild species.	➡
40	Social	Inclusion of citizens, associations, organization, in the activities in and for the land.	➡
41	Landscape	Restore natural landscape, waterways, slopes, biodiversity hotspots, traditional infrastructure etc.	⬆
42	Biofuels	Working climate natural. Using biofuels as much as possible to erase your carbon footprint.	➡
43	Planting on ridges	Planting in smart way. When lands are sometimes flooded, planting on ridges. When always dry, planting in furrows. Or in between!	➡
44	Firewood 10% rule	Lo leave around 10% of all deadwood, laying down or standing, for biodiversity purposes.	➡
45	Natural Regeneration	Protecting Natural Regeneration by small plant protectors or fences.	➡
46	Flood walls	Building small stones walls in valleys to slow down water flows during heavy rains and regulate erosion.	➡
47	Aquatic filters	Every lake or pond needs aquatic plants to stay clean. Planting special aquatic filtering plants.	➡

48	Shadow trees	Some fruit species like apples and pears can be damaged by too much sun. Planting shadow trees in between the fruits.	⇨
49	Pruning fruit trees	Pruning fruit trees in order to create high trees (extensive) or low trees (intensive).	⇨
50	Machine wide rows	When rows are planted, and annuals has to go in between make sure these have the width of a common harvesting machine.	⇨
51	Planting material	Check list of criteria for healthy plants to verify with the nurseries before choosing nursery and ordering.	⇨
52	Root protection	No machine or soil work around each tree. Taking at least a2x canopy wide circle around each tree.	⇨
53	Live barriers & Filter berms	Planting live barriers with sturdy plants to cover soil avoiding surface runoff and improving biodiversity.	⬆