Appendix 2: Lists of concepts in the aggregated map and their meaning

ID	Final concept	Interpretation/definition based on farmers´ interviews
1	Intensive tillage	Tillage frequency higher than 4 times per year, moldboard plowing and/or deep plowing
2	Tillage	The fact of tilling
3	Down-slope tillage	Tillage direction following the direction of the slope, favoring erosion processes and soil loss
4	West winds	Winds coming from the west usually strong and warm. In spring negatively affect pollination
5	Sun	High temperatures, insolation and evapotranspiration
6	Droughts	Periods of water scarcity
7	Slope	Steep slopes
8	Monoculture	Cultivation of one single crop occupying large land extensions
9	Deforestation	Clear cutting or clearing a forest to convert it to farm land
10	Overgrazing	Excessive grazing causing damage to grasslands, such as compaction and fertility loss
11	Land use change	Conversion from cereal to woody crops, mainly to almond trees
12	Decoupling livestock from arable farming	Separation of livestock from arable production. Disappearance of traditional integrated systems based on woody crops, pastures and sheep
13	Heavy machinery	Change from oxen plow to heavy machinery, leading to the intensification of tillage activities and adaptation of farming practices to machinery
14	Removal of SWCM	Removal of soil and water conservation measures and erosion barriers, such as stone walls, hedgerows, vegetation on field borders, and mainly “atochadas”, a small barrier made of mud and esparto grass or other woody plants for retaining water within terraces
15	Bare soil	Soil without surface protection due to elimination of ground covers
16	CAP improvement plans	Policies from the 90´s prompted by the EU which initially subsidized the use of chemical fertilizers, agrotoxics, tillage and other farming practices, while in later stages of agricultural surpluses, PAC subsidies were destined for not producing, thereby fostering land abandonment and cessation of farming activities
17	Management responding to agribusiness model	Farm management coupled to the green revolution and agribusiness farming model, which has led to the removal of terraces, contour lines, use of heavy machinery, agrochemicals and agrotoxics
18	Land abandonment	Land abandonment partly due the industrialization of agriculture, and relates services and industry. Less labor is needed, and the lack of opportunities in rural areas led to the flight of people from rural areas to cities (rural exodus)
19	Land concentration	Concentration of land ownership in a few owners due to the reduction of the number of farms and the increment of the farm size
20	Agrotoxics	Pesticides and herbicides used in agriculture to eliminate weeds, insects, fungi or any other living organisms affecting crop performance
21	Chemical fertilizers	Mineral fertilizers including mainly simple and mixed N, P, K fertilizers
22	Overexploitation of water resources	Water extraction rates beyond natural recharge. This includes groundwater extraction from (i)legal drilled wells and water reservoirs to water traditional rain-fed crops, high-yielding horticultural crops, or intensive fruit tree plantations
23	Pig slurry	Watery and nutrient concentrated amendment mixed of feces, urine and water wastes from pig farming, that after treatment is often used as fertilizer
24	Organic matter	Organic matter component of soil, consisting of plant and animal detritus, cells and tissues of soil microbes, and substances that soil microbes synthesize
25	Loss of traditional knowledge	Loss of traditional knowledge of farming practices and management used by farmers before the arrival of "Green Revolution model". Traditional knowledge includes understandings to maintain soil fertility through careful management of organic material; to avoid pest outbreaks through intercropping and natural remedies, and about crop varieties, soil types and their best combination, involving a deep connection to the land and its stewardship

26	Loss of peasant self-esteem	Loss of sense of self, the value of the community and the value of the peasant´s profession, as a result of years of denigration and prejudice fostered by the green revolution model
27	Torrential rainfalls	Extreme and concentrated rainfall events occurring in the southeast, and the Mediterranean coast, of Spain. Usually occur during the beginning of Autumn and Spring with the arrival of the Cold Drop phenomenon. In agricultural lands these events often cause huge soil losses via water erosion affecting crop production due to the fall of flowers and fruits
28	High temperatures	Temperatures over 40ºC. During blossoming bees do not visit flowers at high temperatures, negatively affecting pollination.
29	Water availability	Water supply to meet crop requirements as a crucial factor in drought-prone agricultural areas
30	Late frosts	Frost occurring in spring that freeze blossoms and green almond nuts
31	Early frosts	Frost occurring in early winter which delays blossoming avoiding possible yield losses caused by late frosts
32	Hailing at fruit setting	Hailing during fruit setting damages almond nuts and produces the fall of fruits jeopardizing annual crop production
33	Soil fertility	Natural fertility intrinsic of the different soil types
34	Soil biodiversity	Number and diversity of organisms present in the soil required for soil health, fertility and overall soil functioning
35	Soil balance	Equilibrium between the organic and mineral fractions of the soil and the soil organisms
36	Soil structure	How particles are aggregated in the soil. Good soil structure enhances soil porosity, water holding capacity and decomposition processes fostering nutrient cycling
37	Pollination	Fertilization of almond flowers by bees and other pollinators
38	Fog	Fog. During blossoming negatively affects pollination
39	Cultivation practices	All the processes involved in the production of plant-based systems carried by the farmer, from seedling to harvesting, including fertilization, tillage, planting, pruning, pest treatments…
40	Almond variety	Almond varieties belong to the hard shell type and have different characteristics such as flowering time and sensibility to pests and diseases, and include Guara, Ferragnes, Marcona, Vairo, Desmayo Largueta, Marta, Constanti, Antoñeta, Penta and Marinada among others. The variety of almond can highly condition annual yields depending on the biophysical and climatic conditions where it is planted
41	Pests and diseases	Organisms that cause damage to almond trees conditioning yield. Most important pest and diseases include big head worm (*Capnodis tenebrionis*), almond-tree leaf skeletonizer moth (*Aglaope infausta*) and the monilinia fungus (*Monilinia laxa)*
42	Almond tree health	Includes all factors that contribute to a good performance of the almond tree, including the nutritional status of almond trees
44	Biodiversity	Aboveground biodiversity (insects, plants, crops, animals)
45	Pruning	Type, frequency and timing (green or dry) of the pruning
46	Rootstock type	Ungrafted or hybrid. The rootstock type influences the tree life time, performance and susceptibility to pests and diseases
47	Pest treatment	Preventive and in-situ management of pests using copper and other products allowed in organic farming
48	No tillage	Farming without disturbing the soil profile through tillage activities
49	Wildlife damage	Damage caused to almond trees by wild goats (*Ammotragus lervia*), wild pigs and rabbits
50	Plantation design	Factors to take into account for the establishment of an almond plantation such as the planting frame, the contour lines, terraces, almond variety…
51	Almond price	Organic certified almonds have an added value as "regenerative" branded which translates into the increase of price
52	Almond performance	Caliber and weight of kernel nuts, and amount of empty almonds in 1kg of shell almonds. Higher performance implies higher proportion of filled almonds with higher caliber and weight

53	Feeling of belonging	Strong emotional feeling, need or desire of belonging to a community of people, a territory or a place
54	Benefits to sheep farming	Better nutritional status and health of the herd due to the supply of high quality fodder to sheep, which translates into less veterinary costs for the shepherd
55	Bequest values	Value that the current generation places on ensuring the availability of biodiversity and ecosystem services to future generations. This is determined by a person's concern that future generations should have access to resources and opportunities. It indicates a perception of benefit from the knowledge that resources and opportunities are being passed to descendants
56	Convinced about RA benefits	Farmers´ conviction regarding RA restoration capacity based on their own experience or perceptions
57	Demonstrative effect	Effects on the behavior of individuals, mainly neighbors, caused by observation of the results achieved through the adoption of regenerative agriculture
58	Fossil fuels use reduction	Diesel and oil use reduction due to the minimization of tillage activities, the non-use of chemical fertilizers and agrotoxics used in conventional farming
69	Happiness	Feeling of pleasure and joy experienced by a person from doing what she/he beliefs is right
60	Improved market access & business opportunities	Higher demand of products by companies, and better access to markets and business opportunities such as agro-tourism, supported by higher media visibility
61	Initial investment increases	Initial investment necessary to adapt a farm to regenerative which entails the implementation of landscape and soil restoration practices such as erosion barriers, swales, key-line design, replanting of hedgerows and borders, composts, green manure, and machinery for RA practices management
62	Innovation & adaptation capacity	Willingness and capacity to innovate in farming, adapt the farming system and farming management, invent or adapt new farming practices and technologies
63	Input costs increases	Cost from compost, green manure seeds, and other RA practices. When input costs decrease is mainly due to diesel saving from reducing tillage operations
64	Inspiration	People's hope, sense of purpose and personal drive to make a difference and contribute to society
65	RA Knowledge and experience requirements	RA is a farming approach that works with natural processes to maximize the provisioning of ecosystem services and requires a farmer´s complex understanding of the biophysical and climatic context, and knowledge and experience on RA practices and management strategies for an effective implementation
66	Labor decreases	Reduction of the need of work force and time dedicated to farming activities as the farming system works more closely to natural processes, making farming activities less labor demanding
67	Landscape restoration	Includes restoration of landscape functioning, including crucial ecosystem processes, aesthetics, and territory revaluation
68	Learning and experimenting	Farmers´ eagerness to learn and experiment from own and shared experiences
69	Networking	Meeting people working with RA, exchanging knowledge and information with people with a common interest
70	Operational costs decreases	Cost reduction of farming activities. Cost reduction in the short term results mainly from the minimization of tillage activities and pest treatments. In the long term other operational costs might decrease as the systems gets restored, benefiting from natural processes and becoming more simple to manage
71	Policies favoring RA almond purchases	Public policies favoring purchases of regenerative almonds to incentivize a large-scale adoption of RA
72	Profitability	Economic performance considering all production economic costs and benefits. Regenerative almond farming might be more profitable than conventional farming in the medium-long term
73	Self-fulfillment, satisfaction and personal development	Fulfillment of one´s objectives and dreams. Enjoyment of the farm, pride and personal success
74	Social awareness and expectation increases	Society becomes more conscious of the damage caused by unsustainable farming practices, and gains awareness of the restoration potential and benefits of RA
75	Spirituality	Sense of connection with something higher than ourselves

76	Sustainability	Maintaining or enhancing the availability of natural resources and well-functioning farming systems in the long term
77	Social acceptance and support	Social support to RA farmers, initiatives and products enhancing RA adoption. Contrary to social pressure against RA.
78	Territory revaluation	Add value to the territory
79	Land degradation	Natural or human-induced processes like soil erosion that disturb ecosystem functioning leading to reduced production potential and loss of functionality
80	Production	Yield
81	Organic amendments	Animal and plant based fertilizers, such as compost, bokashi, sheep manure and excluding green manure
82	Green manure	Leguminous or mixed cereal-leguminous covers that are used to increase soil fertility
83	Reduced tillage	Shallow plowing (less than 20 cm) carried out a maximum of 2 times per year to minimize soil disturbance