Table S1. Estimated percentage of traded wild mushrooms sourced by informal or grey markets collected in five European countries without considering imports. *Source*: Expert panellists after second round of the Delphi survey.

Informal market: estimated percentage of traded wild mushrooms by country	Number of respondents	Agreed? Yes
Italy: Almost all (98%) the fresh mushrooms that are entering in the supply chain are coming from informal / grey markets	4	0
France - No data	-	-
Spain. Between 40 to 90% of the fresh mushrooms that are entering in the supply chain are coming from informal / grey markets	3	3
Croatia. Around 90% of the fresh mushrooms that are entering in the supply chain are coming from informal / grey markets	2	2
Greece. Around 90% of the fresh mushrooms that are entering in the supply chain are coming from informal / grey markets	1	1

Table S2. Summarized answers from the second round for the question 'How the supply chain will change in the next decade in the Mediterranean Europe (Italy, Spain, France, Croatia, Greece)?' *Source:* Expert panellists after second round of the Delphi survey.

Do you agree with the next statement?	**Yes**	**No**	**I don't know**
Supply chain will not change a lot in the future because it is well put together, the only thing that could change is the impact of some stakeholders	8	6	
Mushroom picking will be regulated and the grey market will decrease	9	5	
There will be reinforced the control of illegal picker organizations	8	5	
Traceability and sustainability will be fundamental for the final consumer. Therefore, the traders will take care about how the mushrooms were picked. It is also expected that European Commission clarifies the level of control of land origin for wild products	12	1	1
The fresh market will move to the countries with higher purchasing power like Germany	6	6	2
It is expected a decrease of traded mushroom volumes	6	7	1
Recreational pickers will increase, and tourism will grow. Probably consumers will enjoy mycology through culinary tourism	10	4	
The administration will be more coordinated, clarifying the different competences that relate to the wild mushroom supply chain	11	3	
The supply chain will grow in several countries like Greece. The increase of wild mushrooms picking and trade as well as the creation of new business companies and wild mushroom restaurants is expected	7	4	2

Table S3. Five most relevant statements for each SWOT component. *Source:* Expert panellists after second round of the Delphi survey.

Statement	1st round		2nd round		SWOT component
	$\tilde{x}$	±	$\tilde{x}$	±	
The work being done in tourism and particularly in gastronomy is rather relevant. There are many chefs and nutritionists interested in promoting culinary value of mushrooms with excellent added value possibilities	-	-	8.21	1.31	Strengths
Mediterranean ecosystem is a pool for big diversity and quality of the mycological resource: Species and yields of great quality, very appreciated at both world and local level, with very well recognized and appreciated species such as Boletes	8.5	1.5	7.96	1.97	Strengths
Mushroom picking is strongly linked with other environmental outdoor activities that are increasing. Wild mushrooms are associated with natural ecosystems (clean activities, health…)	-	-	7.50	1.70	Strengths
High product demand, both internationally and locally with reasonable mature markets	7.39	2.18	7.42	1.54	Strengths
There is a high entrepreneurship attitude, together with a relevant knowledge of the entrepreneurs in several regions of the Mediterranean	-	-	7.27	1.54	Strengths
Lack of organization of the sector with still informal markets and operators not compliant with legal regulations in the Mediterranean Europe, favoured by the differential mandatory food certificate systems in all European countries	8.69	1.97	8.14	2.41	Weaknesses
Absence of a European legal framework for mushroom market food chain	-	-	8.11	2.42	Weaknesses
Conflicts between value chain actors (industry - mycologists)	-	-	8.07	2.46	Weaknesses
There is a great deal of international competition and lack of traceability in mushroom products, fresh and processed	-	-	7.54	2.40	Weaknesses
Informal markets, opacity and lack of traceability in the Mediterranean Europe	7.46	2.76	7.25	2.58	Weaknesses
Creation of a real common market organization specifically for wild mushrooms (and other wild products) with common health procedures and labelling	-	-	9.32	1.14	Opportunities
Mycotourism with a set of alternatives including mushroom picking, gastronomy, etc… Increase of interest in rural culture, gastronomy and nature	7.86	2.44	8.04	2.11	Opportunities

Statement	1st round		2nd round		SWOT component
	$\tilde{x}$	±	$\tilde{x}$	±	
Increase of interest of mycological and gastronomic culture at both regional Mediterranean Europe and global scale	7.50	2.71	7.36	2.99	Opportunities
There are a lot of mushroom species that will be appreciated in the future (food, medicine, cosmetics…) and that remain totally or partially unknown	7.23	2.59	7.04	2.38	Opportunities
Development of quality brands, mainly for fresh mushrooms, following the example of Fungo di Borgotaro	7.43	2.56	7.04	2.80	Opportunities
Several value chain actors that are not compliant with the law remain uncontrolled (including several restaurants who continue to purchase mushrooms from informal pickers)	7.14	2.57	7.82	1.35	Threats
Big disturbances / Large events such as mega-fires, accidents that affect the mushroom yields	-	-	7.61	1.90	Threats
The increase of interest in the fungal related activities by mycologists, protectionists and general public may put pressure on politicians who could over protect the forest ecosystems provoking undesired impacts to the wild mushroom market	-	-	7.25	2.12	Threats
Increase of wild mushroom yields irregularity due to climate change (which is forecasted to have a higher impact in the Mediterranean Europe)	7.08	2.70	6.82	2.88	Threats
Depletion of the value of the mushroom collected in the Mediterranean Europe because the market is supplied with mushrooms from other regions (countries outside EU) with lower labour costs	7.07	3.47	6.71	3.37	Threats

*Statements were rated on the scale from 0 – 10, where mark 0 means the statement is not relevant, while mark 10 means that statement is most relevant. $\tilde{x}$ - average score, ± - standard deviation. No score (-) means that statement wasn't present during the 1st round of survey.

Table S4. Full list of challenges identified within the wild mushroom sector. *Source:* Expert panellists after second round of the Delphi survey.

Challenge	**1st round**		**2nd round**		**Challenge type**
	$\tilde{x}$	±	$\tilde{x}$	±	
More coordination of the different administrations that intervene with the mushroom related activities	-	-	9.00	0.88	Production / harvesting
Common protocol in EU for the mandatory analysis of chemical residues	-	-	8.11	1.33	Production / harvesting
Regulation of wild mushroom picking preventing impacts on the wild mushroom functioning	7.07	3.83	6.29	4.01	Production / harvesting
Appropriate taxation for mushroom picking activity in the Mediterranean Europe (adapted to its complementary character)	7.86	2.79	7.96	2.22	Production / harvesting
Control of illiberal harvesting / informal norms	7.93	3.12	6.81	3.49	Production / harvesting
Domestication of Wild Mushroom species	6.46	2.63	6.46	2.44	Production / harvesting
Increase of mushroom yields through mycosilviculture and mushroom oriented management adapting forestry operations to this purpose	6.43	2.68	6.29	2.43	Production / harvesting
Product traceability, chain of custody.	8.25	2.29	7.65	2.56	Transformation
- *Some experts differentiate the previous statement in two: FIRST: Traceability*	-	-	7.79	2.72	Transformation
- *Some experts differentiate the previous statement in two: SECOND: Chain of custody*	-	-	5.57	4.42	Transformation
Common quality standards	7.17	3.51	7.15	3.31	Transformation
Labels and certification	7.29	3.56	7.14	3.35	Transformation
Traceability, labels, regional & cooperative brands, certification	7.23	2.28	6.79	2.55	Commercialization
- *Some experts differentiate the previous statement in two: FIRST: Traceability*	-	-	7.14	2.76	Commercialization
- *Some experts differentiate the previous statement in two: SECOND: Labels, regional & cooperative brands, certification*	-	-	6.43	3.55	Commercialization
Mycotourism	6.86	3.28	6.61	3.38	Commercialization
Product profiling/commercial distinction aiming to add value to the product	6.45	2.88	6.23	2.84	Commercialization
Effective proscription of informal markets and nonstandard products	5.58	3.42	5.46	3.09	Commercialization
Integration of mushroom value chain actors – inter-professional integration aiming to face the common sectorial challenges.	7.08	1.75	6.61	2.10	Other
Education, training and awareness	7.64	1.39	7.64	1.15	Other

*Challenges were rated on the scale from 0 – 10, where mark 0 means the challenge is not relevant, while mark 10 means that challenge is most relevant. $\tilde{x}$ - average score, ± - standard deviation. No score (-) means that challenge wasn't present during the 1st round of survey.

Table S5. Full table of prioritized actions to be taken aiming to increase the resilience of the wild mushroom sector, scored by the panellists. *Source:* Expert panellists after second round of the Delphi survey.

Challenge	**1st round**		**2nd round**	
	$\tilde{x}$	±	$\tilde{x}$	±
Creation of a common list of mushrooms that can be commercialized freely in EU.	-	-	9.32	0.91
Strengthen the link between mushrooms and gastronomy.	8.29	1.64	8.54	0.93
Development of an adequate / equitable taxation system for all the value chain actors	7.92	2.72	7.88	2.36
Requesting financial support for the mycosilviculture of natural forest areas in order to increase the number of professional pickers	-	-	7.73	3.57
Development of product traceability	8.00	2.29	7.64	2.37
Product valorisation on the levels expanding the value chain	7.00	3.21	6.93	3.33
Interprofessional integration of the value chain	6.71	2.55	6.68	1.81
Mushroom yield increase and interannual production variability reduction through mycosilviculture and management	6.36	2.77	6.36	2.27
Request of tourism diploma and language skills to lead mycotourism groups	-	-	5.39	3.69
Domestication of wild mushroom species.	5.23	3.33	5.38	3.18
Research on effect on mushroom picking on future yields	5.43	3.03	4.82	2.96

*Actions were rated on the scale from 0 – 10, where mark 0 means the action is not relevant, while mark 10 means that action is most relevant. $\tilde{x}$ - average score, ± - standard deviation. No score (-) means that action proposal wasn't present during the 1st round of survey.