



PRELIMINARY RESULTS OF NEEDS  
ANALYSIS WITH QUESTIONNAIRE



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## Needs Analysis and Research

The data was collected through an electronic structured questionnaire during the month of May 2022. The main questionnaire entitled URBAN TREES MANAGEMENT in EUROPE - euTrees was constructed through google forms and distributed to scientists and technicians involved in the management of urban trees in Europe. The questionnaire can be found in Annex 2.

The questionnaire has an introductory paragraph and consists of 40 closed and open-ended questions. It has 5 questions about the "demographic" characteristics of the respondents: name, email (optional), the organization they belong to, their position in it and the country in which they operate. Followed by closed-ended questions based mostly on three choices, Yes – No – Not sure/Don't know. Five questions seek additional information with an extra open-ended, comment question and there was also an open-ended final question asking if the respondent had anything additional to add. The answers on these questions are presented in Annex 1 in the language in which the response was recorded.

This questionnaire will contribute to the creation and promotion of an integrated training and certification standard in urban tree management in Europe. In addition, it will contribute to the "needs analysis", regarding education and training and certification programs for urban green technicians and workers, as well as the description of a new and expanded certification for people responsible for urban green management. For this purpose, its structure is based on PESTEL(E) analysis as described below.

Modified PESTELE analysis with additional educational (E) parameter:

<b>P:</b> Political
<b>E:</b> Economic
<b>S:</b> Social
<b>T:</b> Technological
<b>E:</b> Environmental
<b>L:</b> Legal
<b>E:</b> Education

## *eu Trees*

Variable	Information gain and associated questions
Political	<ul style="list-style-type: none"> <li>• As higher education institutions and VET (Vocational Education and Training) depend on government education policy, can they easily add a training module on urban tree management or urban arboriculture? <b>(Q5)</b></li> <li>• Is it easy to communicate and cooperate with ministries and other administrative bodies in the areas of education and legislation, regarding the issue of urban tree management? <b>(Q6)</b></li> <li>• Can the implementation of new policies, whether on education or labor rights, as well as certifications for tree managers, be incorporated as part of a "green agenda"? <b>(Q7)</b></li> <li>• Do municipalities in your country have any of the following plans or strategies? <b>(Q19)</b></li> </ul>
Economic	<ul style="list-style-type: none"> <li>• Do local municipalities/authorities manage urban trees in parks and green spaces? <b>(Q2)</b></li> <li>• Can public trees and public green spaces be managed by the private sector? <b>(Q3)</b></li> <li>• Is there a market need for certified tree managers? <b>(Q13)</b></li> <li>• Would potential customers prefer certified tree management personnel? <b>(Q14)</b></li> </ul>
Social	<ul style="list-style-type: none"> <li>• Do citizens recognize the need to protect and manage urban trees? <b>(Q15)</b></li> <li>• Does the public agree with the need to protect urban trees in the face of climate change? <b>(Q16)</b></li> <li>• Does the public trust certified personnel in the field of green management and/or maintenance? <b>(Q17)</b></li> <li>• Are green skills welcomed by the public? <b>(Q18)</b></li> </ul>
Technological	<ul style="list-style-type: none"> <li>• Does the competent authority managing urban trees make use of new technologies, such as GIS and geo-location technologies, digital archive, database and spatial database, etc., and performs a risk assessment of the trees it manages? <b>(Q11)</b></li> <li>• Do you believe that in order to effectively manage urban trees it is necessary to use new technologies and carry out a risk assessment of them; <b>(Q12)</b></li> </ul>
Environmental	<ul style="list-style-type: none"> <li>• Has climate change negatively affected urban trees and green spaces? <b>(Q20)</b></li> <li>• Is there a need to protect urban biodiversity? <b>(Q21)</b></li> <li>• Is there a need for best practices in urban tree management? <b>(Q22)</b></li> <li>• Is there a shortage of experienced and/or trained staff in local municipalities to manage urban trees? <b>(Q23)</b></li> </ul>
Legal	<ul style="list-style-type: none"> <li>• Do common EU laws and rules apply; <b>(I3)</b></li> <li>• Is local environmental legislation involved in the</li> </ul>

## *eu Trees*

Variable	Information gain and associated questions
	<p>management of urban trees? (<b>Q8</b>)</p> <ul style="list-style-type: none"> <li>• Are there specific laws to protect specific tree species or areas? (<b>Q8</b>)</li> <li>• Is there a common policy for urban trees across the country? (<b>Q9</b>)</li> <li>• Do existing laws require any type of certification for tree workers and managers? (<b>Q10</b>)</li> </ul>
Education	<ul style="list-style-type: none"> <li>• Are arboriculture modules, specifically for urban tree management, taught in educational institutions of any level? (<b>Q4</b>)</li> <li>• Are ECTS and EQF standards valid in the country? (<b>Q24</b>)</li> <li>• Are there educational institutions of various levels in the field of arboriculture in your country? (<b>Q25</b>)</li> <li>• Are environmental and green education and skills programs available at VET or higher education institutions? (<b>Q26</b>)</li> <li>• If you answered yes, are they in demand among students? (<b>Q26a</b>).</li> <li>• Are there certified training programs such as European Tree Worker and European Tree Technician or similar in your country? (<b>Q27, Q1</b>)</li> <li>• Do you believe that a new extended certification for urban tree management in Europe is currently required for people responsible for urban green management? (<b>Q28</b>)</li> </ul>

## Results

The questionnaire was answered by a total of 133 people in 8 countries. The descriptive statistics presented below use the data from the four countries with a sufficient number of responses (at least >10).

I3. Country you operate:	Number of answers
Greece	<b>39</b>
Italy	<b>21</b>
Serbia	<b>48</b>
Slovenia	<b>20</b>
Norway	2
Sweden	1
Montenegro	1
Spain	1

The answers per PESTELE variable are presented in pivot tables from the frequencies of the answers for each question with a comparison between countries (split file). At the same time, a non-parametric Independent Samples Kruskal Wallis test was carried out and where statistically significant differences ( $P < 0.05$ ) between countries were found, it is mentioned in the commentary on the results of each question.

## Political

In the political variable, common trends are generally observed between the participating countries. It appears that government intervention is not required to include arboriculture training modules in educational institutions (Q5). Communication with the involved ministries and the public sector is recorded as problematic and difficult, with Slovenians showing a high percentage of unawareness about the issue (Q6). At the same time, there do not seem to be any or widely known policies that can be used to establish proper education for the management of urban trees (Q7).

**Q5. Can higher education institutions and VET providers add an arboriculture education module without governmental involvement?**

	Percentage %			
	Not sure/Don't know	No	Yes	Total
Greece	33,3	10,3	56,4	100,0
Italy	61,9	9,5	28,6	100,0
Serbia	25,0	27,1	47,9	100,0
Slovenia	55,0	5,0	40,0	100,0

**Q6. Is it easy to communicate and cooperate with associated ministries and other governing bodies in areas of education and legislation on the topic of urban tree management?**

	Percentage %			
	Not sure/Don't know	No	Yes	Total
Greece*	12,8	79,5	7,7	100,0
Italy	28,6	52,4	19,0	100,0
Serbia	43,8	33,3	22,9	100,0
Slovenia*	65,0	25,0	10,0	100,0

\*Slovenia – Greece, differ statistically significantly

**Q7. Is there a political green agenda in effect that could be helpful for establishing urban trees education and labour - professional rights?**

	Percentage %			
	Not sure/Don't know	No	Yes	Total
Greece	35,9	43,6	20,5	100,0
Italy	28,6	19,0	52,4	100,0
Serbia	45,8	25,0	29,2	100,0
Slovenia	45,0	30,0	25,0	100,0

Question 19 is a multiple response question and its results are presented below. In Greece, there are 6 strategies that municipalities have, in Italy 8, in Serbia 10 and in Slovenia 6. The largest percentage for each country is ignorance. In all countries, municipal plans for local strategic adaptation to climate change, a climate change plan and a water management plan are recorded. All three can be used in training for modern arboriculture. Most countries also have a local biodiversity plan.

**eu Trees**

I3. Country you operate:	Q19. Do the municipalities in your country have any of the following plans or strategies?	Responses		Percent of Cases
		N	Percent	
Greece	I don't know	11	23,4%	28,2%
	Resilience strategy	6	12,8%	15,4%
	<b>Local adaptation to climate change strategy</b>	6	12,8%	15,4%
	<b>Climate action plan</b>	2	4,3%	5,1%
	<u>Urban biodiversity plan</u>	1	2,1%	2,6%
	Tree master plan	2	4,3%	5,1%
	<b>Water managment plan</b>	3	6,4%	7,7%
	None of the above	16	34,0%	41,0%
<b>Total</b>		<b>47</b>	<b>100,0%</b>	<b>120,5%</b>
Italy	I don't know	13	37,1%	61,9%
	<b>Local adaptation to climate change strategy</b>	2	5,7%	9,5%
	<b>Climate action plan</b>	2	5,7%	9,5%
	Air quality plan	4	11,4%	19,0%
	Local recovery plan	2	5,7%	9,5%
	<u>Urban biodiversity plan</u>	1	2,9%	4,8%
	Tree master plan	3	8,6%	14,3%
	<b>Water management plan</b>	3	8,6%	14,3%
	Soil managment plan	3	8,6%	14,3%
	None of the above	2	5,7%	9,5%
<b>Total</b>		<b>35</b>	<b>100,0%</b>	<b>166,7%</b>
Serbia	I don't know	16	20,0%	33,3%
	Resilience strategy	1	1,3%	2,1%
	<b>Local adaptation to climate change strategy</b>	5	6,3%	10,4%
	<b>Climate action plan</b>	7	8,8%	14,6%
	Air quality plan	13	16,3%	27,1%
	Local recovery plan	2	2,5%	4,2%
	<u>Urban biodiversity plan</u>	6	7,5%	12,5%
	Tree master plan	1	1,3%	2,1%
	Green / blue infrastructure plan	9	11,3%	18,8%
	<b>Water managment plan</b>	14	17,5%	29,2%
	Soil managment plan	1	1,3%	2,1%
	None of the above	5	6,3%	10,4%
<b>Total</b>		<b>80</b>	<b>100,0%</b>	<b>166,7%</b>
Slovenia	I don't know	10	35,7%	50,0%
	<b>Local adaptation to climate change strategy</b>	1	3,6%	5,0%
	<b>Climate action plan</b>	2	7,1%	10,0%
	Air quality plan	4	14,3%	20,0%
	Local recovery plan	1	3,6%	5,0%
	Tree master plan	1	3,6%	5,0%
	<b>Water management plan</b>	5	17,9%	25,0%
	None of the above	4	14,3%	20,0%
<b>Total</b>		<b>28</b>	<b>100,0%</b>	<b>140,0%</b>

a. Dichotomy group tabulated at value 1.



Economic

In all countries the municipalities have the central management of urban trees (Q2), while everywhere the private sector can undertake their management, with the Serbians not being so sure (Q3). In all countries a market need for certified tree managers is evident (Q13), while certified workers are believed to, even where not required by law, be desirable to potential employers in either the private or public sector (Q14).

**Q2. Do local municipalities/authorities manage urban trees in parks and green spaces?**

	Percentage %			
	Not sure/Don't know	No	Yes	Total
Greece	2,6	2,6	94,9	100,0
Italy	0,0	19,0	81,0	100,0
Serbia	12,5	4,2	83,3	100,0
Slovenia	0,0	0,0	100,0	100,0

**Q3. Can private sector manage urban trees in parks and green spaces?**

	Percentage %			
	Not sure/Don't know	No	Yes	Total
Greece	2,6	12,8	84,6	100,0
Italy	4,8	19,0	76,2	100,0
Serbia*	33,3	22,9	43,8	100,0
Slovenia	0,0	25,0	75,0	100,0

\*Serbia differs statistically significantly from the other counties

**Q13. Do you believe there is a market need for certified tree handlers in your country?**

	Percentage %			
	Not sure/Don't know	No	Yes	Total
Greece	0,0	10,3	89,7	100,0
Italy	19,0	4,8	76,2	100,0
Serbia	10,4	10,4	79,2	100,0
Slovenia	15,0	5,0	80,0	100,0

**Q14. Would potential clients (private or public sector) prefer certified tree handlers?**

	Percentage %				Total
	Not sure/Don't know	No	Yes	Required by law	
Greece	15,4	5,1	71,8	7,7	100,0
Italy	14,3	0,0	57,1	28,6	100,0
Serbia	16,7	6,3	52,1	25,0	100,0
Slovenia	25,0	10,0	55,0	10,0	100,0

**Social**

In general, there is a sense that citizens recognize the need to protect and properly manage urban trees with rates in Serbia and Slovenia being significantly better than Greece and Italy (Q15). At the same time, it seems that the public also recognizes the need to protect urban trees in the face of climate change (Q16). In addition, green skills seem to be mainly welcomed by the public (Q18), however there is not much trust from the public in certified personnel in the field of green management and/or maintenance (Q17).

**Q15. Do the citizens acknowledge the need for urban tree protection and appropriate management?**

	Percentage %			
	Not sure/Don't know	No	Yes	Total
Greece	23,1	35,9	41,0	100,0
Italy	19,0	33,3	47,6	100,0
Serbia	18,8	20,8	60,4	100,0
Slovenia	15,0	5,0	80,0	100,0

**Q16. Does the public acknowledge the need for urban trees protection in the face of climate change?**

	Percentage %			
	Not sure/Don't know	No	Yes	Total
Greece	20,5	35,9	43,6	100,0
Italy	33,3	14,3	52,4	100,0
Serbia	18,8	18,8	62,5	100,0
Slovenia	30,0	15,0	55,0	100,0

**Q17. Are certified personnel in tree care and management trusted by the public?**

	Percentage %				Total
	Not sure/Don't know	No	Yes	Not applicable	
Greece	20,5	35,9	35,9	7,7	100,0
Italy	33,3	38,1	23,8	4,8	100,0
Serbia	47,9	18,8	18,8	14,6	100,0
Slovenia	35,0	0,0	65,0	0,0	100,0

**Q18. Are green skills welcome by the public?**

	Percentage %				Total
	Not sure/Don't know	No	Yes		
Greece	35,9	7,7	56,4		100,0
Italy	33,3	9,5	57,1		100,0
Serbia	22,9	4,2	72,9		100,0
Slovenia	35,0	0,0	65,0		100,0

Technological

Respondents from all four countries, vastly believe that in order to effectively manage urban trees, it is necessary to assess their risk. At the same time, it seems that they believe that the competent authority that manages them, carries out risk assessments of them to a varying extent (with the exception of Serbia where significant unawareness prevails and Greece where a negative answer prevails) (Q11-12).

**Q11. Do the pertinent authority that manages the urban trees in your city: [performs tree risk assessments?]**

	Percentage %				Total
	Not sure/Don't know	No	Yes	Partially	
Greece*	7,7	33,3	25,6	33,3	100,0
Italy	4,8	23,8	52,4	19,0	100,0
Serbia*	43,8	12,5	25,0	18,8	100,0
Slovenia	5,0	20,0	55,0	20,0	100,0

\*Serbia – Greece, differ statistically significantly

**Q12. Do you believe that in order to manage urban trees effectively: [tree risk assessment is necessary?]**

	Percentage %			
	Not sure/Don't know	Yes	Partially	Total
Greece	0,0	97,4	2,6	100,0
Italy	0,0	100,0	0,0	100,0
Serbia	0,0	95,8	4,2	100,0
Slovenia	10,0	90,0	0,0	100,0

The use of new digital technologies incorporating GIS and GPS for tree management does not seem to be used consistently and to a satisfactory extent by all decision-makers for tree management, but they are considered very important for their effective management based on the opinion of the respondents (Q11- 12).

**Q11. Do the pertinent authority that manages the urban trees in your city: [utilises GIS and geolocation technologies for tree management?]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	7,7	69,2	7,7	15,4	100,0
Italy*	14,3	14,3	71,4	0,0	100,0
Serbia*	47,9	29,2	16,7	6,3	100,0
Slovenia*	15,0	25,0	50,0	10,0	100,0

\*Serbia – Slovenia και Serbia – Italy, differ statistically significantly

**Q12. Do you believe that in order to manage urban trees effectively: [the use of GIS and geolocation technologies for tree management is a necessity?]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	5,1	2,6	84,6	7,7	100,0
Italy	0,0	0,0	100,0	0,0	100,0
Serbia	0,0	4,2	85,4	10,4	100,0
Slovenia	15,0	0,0	85,0	0,0	100,0

The use and maintenance of a detailed digital record of tree management is not a common practice by the competent authorities, but the digital inventory is considered necessary for the effective management by the respondents (Q11-12).

**Q11. Do the pertinent authority that manages the urban trees in your city: [keeps a detailed tree management digital record?]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	10,3	69,2	5,1	15,4	100,0
Italy*	14,3	23,8	42,9	19,0	100,0
Serbia*	45,8	25,0	18,8	10,4	100,0
Slovenia	25,0	30,0	35,0	10,0	100,0

\*Serbia – Italy, differ statistically significantly

**Q12. Do you believe that in order to manage urban trees effectively: [a digital tree inventory is a necessity?]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	2,6	2,6	87,2	7,7	100,0
Italy	4,8	0,0	95,2	0,0	100,0
Serbia	2,1	0,0	91,7	6,3	100,0
Slovenia	5,0	0,0	95,0	0,0	100,0

The existence of a digital spatial database of trees is considered necessary for the effective tree management, but it is used in a small percentage in Greece, a satisfactory one in Italy and Slovenia, while there is great unawareness about what is happening in Serbia (Q11-12). The same pattern applies to the importance of recording and updating the database with all management interventions on urban trees, a task which, however, does not seem to be performed, by the authorities with observed differences between the countries (Q11-12).

**Q11. Do the pertinent authority that manages the urban trees in your city: [keeps a digital spatial database of the trees?]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	7,7	69,2	5,1	17,9	100,0
Italy*	14,3	14,3	57,1	14,3	100,0
Serbia*	45,8	27,1	18,8	8,3	100,0
Slovenia	20,0	25,0	40,0	15,0	100,0

\*Serbia – Italy, differ statistically significantly

## *eu Trees*

**Q12. Do you believe that in order to manage urban trees effectively: [a digital spatial database of the trees is a necessity?]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	2,6	2,6	84,6	10,3	100,0
Italy	0,0	0,0	95,2	4,8	100,0
Serbia	0,0	4,2	91,7	4,2	100,0
Slovenia	5,0	0,0	95,0	0,0	100,0

**Q11. Do the pertinent authority that manages the urban trees in your city: [regularly updates that database?]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	25,6	66,7	2,6	5,1	100,0
Italy	23,8	33,3	28,6	14,3	100,0
Serbia*	50,0	33,3	10,4	6,3	100,0
Slovenia*	20,0	35,0	30,0	15,0	100,0

\*Serbia – Slovenia, differ statistically significantly

**Q12. Do you believe that in order to manage urban trees effectively: [a detailed digital record of all managing actions is a necessity?]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	2,6	0,0	89,7	7,7	100,0
Italy	0,0	0,0	90,5	9,5	100,0
Serbia	2,1	0,0	89,6	8,3	100,0
Slovenia	15,0	5,0	70,0	10,0	100,0

Finally, the majority of the public wants this management information (and other like risk assessment) available. This need is not met by the competent authorities (Q11-12).

**Q11. Do the pertinent authority that manages the urban trees in your city: [has that information available to the public?]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	5,1	84,6	7,7	2,6	100,0
Italy	14,3	52,4	9,5	23,8	100,0
Serbia	39,6	33,3	16,7	10,4	100,0
Slovenia	20,0	50,0	10,0	20,0	100,0

**Q12. Do you believe that in order to manage urban trees effectively: [public availability of the above records is a necessity?]**

	Percentage %				Total
	Not sure/Don't know	No	Yes	Partially	
Greece	2,6	17,9	69,2	10,3	100,0
Italy	0,0	9,5	71,4	19,0	100,0
Serbia	6,3	6,3	70,8	16,7	100,0
Slovenia	10,0	5,0	55,0	30,0	100,0

**Environmental**

On environmental issues there is a consensus of opinion in several areas among respondents from the four counties. There is an agreement that climate change has negatively affected urban trees and green spaces and 69 free-response examples were given out of a total of 119 positive responses (Q20, Q20a) with the main ones being direct impacts such as drying, water shortages and disasters from extreme phenomena.

**Q20. Has climate change negatively affected urban trees and green spaces in your country?**

	Percentage %				Total
	Not sure/Don't know	No	Yes	Total	
Greece	17,9	20,5	61,5	100,0	
Italy	28,6	9,5	61,9	100,0	
Serbia	27,1	10,4	62,5	100,0	
Slovenia	20,0	15,0	65,0	100,0	

The need to protect urban biodiversity is obvious to the interviewees and they believe that this is also true within the organization they work, to a slightly lesser extent as it is in the existing legislation. On the contrary, they do not believe that the general public or local authorities have the same sensitivities (Q21). In the same pattern the need for best practices in urban tree management is recognized as very important by respondents and to a lesser extent by their working organizations, while the public, legislation and local authorities do not appear to recognize this importance (Q22).

**eu Trees**

**Q21. The need for urban biodiversity protection is evident: [for you]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	0,0	2,6	97,4	0,0	100,0
Italy	0,0	0,0	100,0	0,0	100,0
Serbia	6,3	4,2	87,5	2,1	100,0
Slovenia	5,0	0,0	90,0	5,0	100,0

**Q21. The need for urban biodiversity protection is evident: [by the general public]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	10,3	28,2	35,9	25,6	100,0
Italy	14,3	42,9	23,8	19,0	100,0
Serbia	27,1	8,3	52,1	12,5	100,0
Slovenia	25,0	20,0	20,0	35,0	100,0

**Q21. The need for urban biodiversity protection is evident: [within your institution/organisation]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	5,1	10,3	74,4	10,3	100,0
Italy	0,0	19,0	71,4	9,5	100,0
Serbia	14,6	8,3	66,7	10,4	100,0
Slovenia	0,0	0,0	85,0	15,0	100,0

**Q21. The need for urban biodiversity protection is evident: [by the local authorities]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	15,4	23,1	28,2	33,3	100,0
Italy	14,3	38,1	33,3	14,3	100,0
Serbia	25,0	18,8	47,9	8,3	100,0
Slovenia	5,0	20,0	60,0	15,0	100,0

**Q21. The need for urban biodiversity protection is evident: [in your country's legislation]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	33,3	12,8	30,8	23,1	100,0
Italy	9,5	28,6	38,1	23,8	100,0
Serbia	14,6	20,8	45,8	18,8	100,0
Slovenia	25,0	20,0	40,0	15,0	100,0



**eu Trees**

**Q22. The need for best practices in management of urban trees is recognized: [by you]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	0,0	0,0	97,4	2,6	100,0
Italy	0,0	0,0	100,0	0,0	100,0
Serbia	2,1	4,2	91,7	2,1	100,0
Slovenia	0,0	0,0	95,0	5,0	100,0

**Q22. The need for best practices in management of urban trees is recognized: [by the general public]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	15,4	23,1	35,9	25,6	100,0
Italy	0,0	52,4	23,8	23,8	100,0
Serbia	20,8	27,1	41,7	10,4	100,0
Slovenia	20,0	30,0	20,0	30,0	100,0

**Q22. The need for best practices in management of urban trees is recognized: [within your institution/organisation]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	7,7	15,4	59,0	17,9	100,0
Italy	4,8	14,3	66,7	14,3	100,0
Serbia	12,5	14,6	66,7	6,3	100,0
Slovenia	0,0	0,0	90,0	10,0	100,0

**Q22. The need for best practices in management of urban trees is recognized: [by the local authorities]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	23,1	30,8	20,5	25,6	100,0
Italy	4,8	42,9	23,8	28,6	100,0
Serbia	22,9	33,3	29,2	14,6	100,0
Slovenia	5,0	25,0	35,0	35,0	100,0

**Q22. The need for best practices in management of urban trees is recognized: [in your country's legislation]**

	Percentage %				
	Not sure/Don't know	No	Yes	Partially	Total
Greece	25,6	30,8	20,5	23,1	100,0
Italy	4,8	38,1	28,6	28,6	100,0
Serbia	22,9	31,3	31,3	14,6	100,0
Slovenia	15,0	45,0	20,0	20,0	100,0

## **eu Trees**

The common tendency of the respondents who believe that there is a general lack of experienced and/or adequately trained personnel for the management of urban trees is evident (Q23).

**Q23. Do you believe there is a lack of experienced and/or adequately trained personnel in the local municipalities or other pertinent authorities' responsible for urban trees management?**

	Percentage %			
	Not sure/Don't know	No	Yes	Total
Greece	2,6	5,1	92,3	100,0
Italy	14,3	9,5	76,2	100,0
Serbia	16,7	4,2	79,2	100,0
Slovenia	0,0	5,0	95,0	100,0

### Legal

Serbia is a candidate for EU membership, while the remaining 3 countries are members of the EU and there is greater consensus in their national legislations based on European directives (I3). All states have, to some extent, specific laws protecting specific types of urban trees or urban green areas, and 57 free-response examples were given out of 61 positive responses. In Serbia and Slovenia there is a high percentage of unawareness (Q8).

**Q8. Are there special laws in effect protecting specific urban tree species or urban green areas?**

	Percentage %			
	Not sure/Don't know	No	Yes	Total
Greece	30,8	17,9	51,3	100,0
Italy	28,6	4,8	66,7	100,0
Serbia	43,8	20,8	35,4	100,0
Slovenia	35,0	15,0	50,0	100,0

Response trends on whether national standards/laws are available on tree care and management are mixed, with 29 free-response examples given out of 34 affirmative responses (Q29). Slovenia seems to have no such

standards or laws in contrast to Italy, while unawareness on the matter seems to prevail to a considerable extent in Greece and Serbia.

**Q9. Are national standards/laws concerning tree care/tree management available and have to be considered before any action?**

	Percentage %			
	Not sure/Don't know	No	Yes	Total
Greece	41,0	20,5	38,5	100,0
Italy*	14,3	38,1	47,6	100,0
Serbia*	54,2	35,4	10,4	100,0
Slovenia	15,0	65,0	20,0	100,0

\*Serbia – Italy, differ statistically significantly

Answers to whether existing laws require any kind of certification for urban tree managers are mostly negative (Q10). For the 14 positive answers, 10 free answer examples have been given. Respondents from Italy have given the most positive and free answers.

**Q10. Are existing laws requiring any type of certification for urban tree managers?**

	Percentage %			
	Not sure/Don't know	No	Yes	Total
Greece	28,2	61,5	10,3	100,0
Italy*	19,0	57,1	23,8	100,0
Serbia*	50,0	41,7	8,3	100,0
Slovenia	30,0	65,0	5,0	100,0

\*Serbia – Italy, differ statistically significantly

**Education**

The terms European Tree Technician and European Tree Worker (ETT & ETW) are known to respondents in Italy and Slovenia, while in Greece and Serbia there is a significant percentage of unawareness (Q1). At the same time, there is unawareness about whether each country complies with the ECTS and EQF standards for education (Q24).

**Q1. Are you familiar with the terms European Tree Technician and Tree Worker (ETT & ETW)?**

	Percentage %			
	No	Yes	Partially	Total
Greece	30,8	33,3	35,9	100,0
Italy	0,0	57,1	42,9	100,0
Serbia	39,6	27,1	33,3	100,0
Slovenia	10,0	65,0	25,0	100,0

**Q24. Does your country comply with ECTS and EQF standards for education?**

	Percentage %				
	Don't know	No	Yes	I am not sure they are implemented	Total
Greece	20,5	33,3	10,3	35,9	100,0
Italy	33,3	23,8	19,0	23,8	100,0
Serbia	45,8	4,2	14,6	35,4	100,0
Slovenia	45,0	15,0	5,0	35,0	100,0

Teaching of arboriculture modules, especially for the management of urban trees in educational institutions of any level seems to be largely absent and does not correspond to modern techniques and knowledge (Q4) even though there are educational institutions of various levels in the field of arboriculture (Q25).

**Q4. Are arboriculture modules specific for urban tree management taught in educational institutes of any level?**

	Percentage %				
	Not sure/Don't know	No	Yes	In an old fashion (obsolete) manner	Total
Greece	23,1	33,3	10,3	33,3	100,0
Italy	19,0	28,6	23,8	28,6	100,0
Serbia	29,2	8,3	41,7	20,8	100,0
Slovenia	25,0	10,0	50,0	15,0	100,0

**Q25. Do education institutes of various levels in the field of arboriculture exist in your country?**

	Percentage %			
	Not sure/Don't know	No	Yes	Total
Greece	5,1	23,1	71,8	100,0
Italy	9,5	14,3	76,2	100,0
Serbia	18,8	20,8	60,4	100,0
Slovenia	35,0	15,0	50,0	100,0

It seems that there is a lot of ambiguity but also a tendency of positive answers, that environmental and green education and skills programs exist and are available in VET or higher education institutes (Q26). At the same time, where they exist, they seem to be in demand, but there is still an information deficit (Q26a).

**Q26. Are environmental and green skills education programs available in VET providers or higher educational institutes?**

	Percentage %			
	Not sure/Don't know	No	Yes	Total
Greece	48,7	7,7	43,6	100,0
Italy	38,1	19,0	42,9	100,0
Serbia	45,8	8,3	45,8	100,0
Slovenia	60,0	0,0	40,0	100,0

**Q26a. If you answered yes, are they in demand by students?**

	Percentage %			
	Not sure/Don't know	No	Yes	Total
Greece	42,9	14,3	42,9	100,0
Italy	73,3	6,7	20,0	100,0
Serbia	66,7	7,7	25,6	100,0
Slovenia	63,6	0,0	36,4	100,0

Certified training programs do not seem to exist or be particularly well known in each country (Q27). 15 examples of free answers were given to the 15 total positive answers of various certifications.

**Q27. Are there any certified training courses like the European Tree Workers and European Tree Technicians or any other national ones in your country (EAC or other certification)?**

	Percentage %			
	Not sure/Don't know	No	Yes	Total
Greece	38,5	56,4	5,1	100,0
Italy	52,4	9,5	38,1	100,0
Serbia	68,8	31,3	0,0	100,0
Slovenia	40,0	35,0	25,0	100,0

\*Serbia – Slovenia, differ statistically significantly

Finally, there is a clear need for a new expanded certification for people responsible for urban green management in cities in all countries (Q28).

**Q28. Do you believe that new expanded European Tree training for Urban Green Officers (people responsible for managing urban nature) is needed at the moment?**

	Percentage %			Total
	No	Yes	Δεν είμαι σίγουρος-η αυτή τη στιγμή	
Greece	7,7	92,3	0,0	100,0
Italy	4,8	81,0	14,3	100,0
Serbia	0,0	91,7	8,3	100,0
Slovenia	5,0	80,0	15,0	100,0

## Conclusions

<b>Conclusions that apply to all four countries of the survey</b>	
Political	<ul style="list-style-type: none"> <li>Higher education institutions and VET are <b>NOT</b> hindered by government education policy, but cannot easily add an arboriculture training module.</li> <li>It is <b>NOT</b> easy to communicate and cooperate with ministries and other administrative bodies in the areas of education and legislation, regarding the issue of urban tree management.</li> <li><b>There do not seem to be any widely known policies</b> that are part of a "green agenda" to incorporate the implementation of new policies, either on education or labor rights, as well as certifications for tree managers.</li> <li>In all countries, municipal plans for local strategic adaptation to climate change, a climate change plan and a water management plan are reported, and all three can be used in training modules of modern arboriculture.</li> </ul>
Economic	<ul style="list-style-type: none"> <li><b>Local municipalities/authorities manage</b> urban trees in parks and green spaces.</li> <li>Public trees and green spaces <b>CAN</b> be managed by the private sector.</li> <li>There is a market <b>need</b> for certified tree managers.</li> <li>It appears that potential customers will <b>prefer</b> certified staff.</li> </ul>
Social	<ul style="list-style-type: none"> <li>Citizens <b>recognize</b> the need to protect and manage urban trees.</li> <li>The public <b>agrees</b> with the need to protect urban trees in the face of climate change.</li> <li>The public <b>does not seem to have much confidence</b> in certified personnel in the field of green management</li> </ul>

Conclusions that apply to all four countries of the survey	
	<p>and/or maintenance.</p> <ul style="list-style-type: none"> <li>• Green skills are generally <b>welcome</b> by the public.</li> </ul>
Technological	<ul style="list-style-type: none"> <li>• The competent authority that manages urban trees does <b>NOT</b> make use of new technologies, such as GIS and geolocation technologies, digital file, database and spatial database, etc. It performs to some extent a risk assessment of the trees it manages.</li> <li>• Respondents <b>believe</b> that in order to effectively manage urban trees, new technologies need to be exploited and their risk assessment carried out.</li> </ul>
Environmental	<ul style="list-style-type: none"> <li>• Climate change <b>has negatively affected</b> urban trees and green spaces.</li> <li>• The need to protect urban biodiversity <b>is real</b>.</li> <li>• There is a <b>need</b> for best practices in the management of urban trees.</li> <li>• The lack of experienced and/or trained staff in local municipalities that manage urban trees is <b>recognized</b> by respondents.</li> </ul>
Legal	<ul style="list-style-type: none"> <li>• Common EU legislation and directives <b>apply</b>.</li> <li>• Various local or general environmental legislations are involved in the management of urban trees in an often-unclear manner.</li> <li>• There are some special laws to protect certain types of trees or areas.</li> <li>• <b>It is not clear</b> whether there is a common urban tree policy across the territory of each country.</li> <li>• Few existing laws require any kind of certification for tree workers and their managers.</li> </ul>
Education	<ul style="list-style-type: none"> <li>• There is <b>relative</b> knowledge of the European Tree Worker and European Tree Technician in each country.</li> <li>• <b>Ignorance</b> prevails as to whether the ECTS and EQF standards apply in each country.</li> <li>• Arboriculture modules that are taught are <b>few</b> and basically <b>outdated</b> regarding the management of urban trees in educational institutions of any level.</li> <li>• There is <b>no shortage</b> of educational institutions of various levels in the field of arboriculture.</li> <li>• There are probably environmental and green education and skills programs available at VET or higher education institutions. Where they exist, <b>they seem to be in demand</b>.</li> <li>• Certified training programs <b>do not seem to exist</b> or be particularly well known in each country.</li> <li>• There is <b>clearly a need</b> for a new expanded certification for people responsible for urban green management in cities in all countries.</li> </ul>

Annex 1

**Development questions / Qualitative questions:<sup>1</sup>**

**Q8.** Are there special laws in effect protecting specific urban tree species or urban green areas? **Q8a.** If yes, please give some examples:

1. Ιστορικοί Κήποι, Άλση
2. Μόνο σε ορισμένα Πάρκα που διοικούνται από ΔΣ, τα οποία θέτουν κανόνες, π.χ. Πάρκο Τρίτση
3. Στο περιαστικό πράσινο υπάρχουν, στο αστικό Το άρθρο 24 του Συντάγματος αναφέρεται έμμεσα και στην προστασία των ιστορικών τοπίων επίσης Ιστορικοί τόποι Ν. 3028/2002 και Διατηρητέα Μνημεία της Φύσης (Ν. 996/71)
4. Για τα Είδη, υπάρχει ένα παλιό ΠΔ που έχει ενταχθεί στη σύμβαση CITES (για παράδειγμα έτσι προστατεύεται ο Φοίνικας του Θεοφράστου) Ορισμένα μεμονωμένα δένδρα προστατεύονται ως Μνημεία της Φύσης. Οι χώροι που είναι Πάρκα και Άλση προστατεύονται ως δασικοί.
5. Τα πάρκα και άλση προστατεύονται από τη δασική νομοθεσία, συγκεκριμένα δέντρα μπορούν να ενταχθούν σε ειδικό καθεστώς προστασίας πχ ιστορικά δέντρα.
6. Άδεια κοπής εντός χώρων πρασίνου, άδεια κοπής σε κοινόχρηστους χώρους.
7. ΠΕΥΚΟ ΚΥΠΑΡΙΣΣΙ ΕΥΚΑΛΥΠΤΟΣ ΚΑΙ ΔΕΝΤΡΑ ΧΑΡΑΚΤΗΡΙΣΜΕΝΑ ΙΣΤΟΡΙΚΑ/ΜΝΗΜΕΙΑΚΑ/ΒΕΤΕΡΑΝΟΙ ΚΑΘΕ ΕΙΔΟΥΣ
8. Προστασία πλάτανου από μεταχρωματικό έλκος. Μνημείο της φύσης. Περιοχή ιδιαίτερου φυσικού κάλλους.
9. Πολεοδομικός Κανονισμός
10. δασική νομοθεσία για πάρκα και άλση, περιβαλλοντική νομοθεσία για μεμονωμένα είδη δέντρων που μπορεί να βρίσκονται στο αστικό περιβάλλον
11. Δασικά είδη
12. Προστατευόμενο δάσος Διαδίας
13. ΔΑΣΙΚΗ ΝΟΜΟΘΕΣΙΑ
14. 1. Οι δασικοί νόμοι περιλαμβάνουν στις προστατευτικές τους διατάξεις τα δέντρα στα Άλση και Πάρκα. 2. Πολεοδομικές διατάξεις προστατεύουν τα δέντρα στον αστικό ιστό.
15. Πεύκα
16. άρθρο 19 παρ 4 του ν. 1650/1986,
17. άρθρο 3 παρ. 4, άρθρο 5 παρ 2 του ν. 998/1979,
18. άρθρα 58, 59, 60 του ν. 4280/2014,
19. άρθρο 24 παρ. 3β του ν. 3889/2010
20. υπάρχουν επίσης νόμοι εξειδικευμένοι για συγκεκριμένους χώρους πρασίνου όπως για τον Εθνικό Κήπο, Πεδίον του Αρεως, κ.ά.
21. Legge 10/2013 Norme per lo sviluppo degli spazi verdi urbani - Law 10/2013 Rules for the development of urban green spaces; Several

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<sup>1</sup> In the language in which the response was recorded



## ***eu Trees***

- regional laws for urban redevelopment
22. Alberi monumentali e foreste di pianura
  23. Monumentale Trees and protect area laws
  24. LEGGI DI TUTELA DI AREE PARCO E RISERVE NATURALI, LEGGI FORRESTALI, VINCOLI PAESAGGISTICI
  25. landscape protection national law
  26. [https://www.mite.gov.it/sites/default/files/archivio/normativa/legge\\_14\\_01\\_2013\\_10.pdf](https://www.mite.gov.it/sites/default/files/archivio/normativa/legge_14_01_2013_10.pdf),  
[https://www.mite.gov.it/sites/default/files/archivio/allegati/GPP/CAM\\_giardini.pdf](https://www.mite.gov.it/sites/default/files/archivio/allegati/GPP/CAM_giardini.pdf)
  27. municipal green regulation
  28. Low of Nature Protection, Low on Forests, Low of environmental protection, Low on National Parks.
  29. Mnogobrojna parkovi i park šume. Autohtone biljke npr. Picea pmorica
  30. I believe Danube park (Dunavski park) in Novi Sad is protected area.
  31. They don't approve cut's
  32. Hollow oaks are protected. In Oslo trees over a spesific size are protected
  33. Local policy in fvg region protect old and big trees provideing mo ey to keep them safe...
  34. All oaks with 50cm diameter are protected, also in some areas you have to apply before being able to remove trees.
  35. Ley de protección desarbolado urbano de la Comunidad de Madrid 2007
  36. It must permission for cutting private and public trees
  37. tree protection in place when they are close to water. Avenue protect for trees in a row of 5 or more. Protection of trees in churches. Permits have to be given for tree work to be carried out.
  38. LEGGE REGIONALE N. 28 del 19 novembre 2001 protect wild flora and trees. Between trees there is the stone pine. However, the law is not really considered.
  39. Picea omorica on the mountain Kopaonik is protected by the low
  40. Nature Protection Act  
([https://www.paragraf.rs/propisi/zakon\\_o\\_zastiti\\_prirode.html](https://www.paragraf.rs/propisi/zakon_o_zastiti_prirode.html))
  41. Nature protection law <https://www.zzps.rs/wp/zakoni/?script=lat>
  42. Zakon o zaštiti prirode i podzakonska akta
  43. In my city you cant felling trees ( also in privat garden) without make a official request, if the stem is more then 50cm diameter.
  44. Natural parks
  45. Nature monuments
  46. LOW OF NATURE PROTECTION REGULATED PROTECTED OF PLANTS AND ANIMALS
  47. Protected old tree as historic monument
  48. Protected trees, parks, forests, virgin forest, natural parks...
  49. Spatial plans (municipality level) that specify /map /design green infrastrstructure (or green networks).
  50. Municipal legislation protecting green areas
  51. Old and exceptional trees can be protected as heritage trees on local or national level.
  52. ZRSVN
  53. Old trees, Parks, tree alleys are protected in Slovenia by law, two government institute manages that.

## **eu Trees**

54. Zavod za varstvo narave in Zavod za varstvo kulturne dediščine
55. Old city parks are protected and permission is needed for all maintenance.
56. Carska Bara, Potisje-Okanj, Zasavica
57. National law about heritage trees protection, about species selection, about trees inventories. Regional laws about heritage trees protection

**Q9.** Are national standards/laws concerning tree care/tree management available and have to be considered before any action? **Q9a.** If yes, please specify:

1. ΕΤΕΠ
2. [http://www.elot.gr/1501-10-06-04-01\\_TP\\_ENQ\\_170510.pdf](http://www.elot.gr/1501-10-06-04-01_TP_ENQ_170510.pdf), χρειάζεται περαιτέρω επεξεργασία, επικαιροποίηση και αναφορά στη διαχείριση συγκεκριμένων ειδών
3. Οι Τεχνικές Προδιαγραφές ΕΛΟΤ. Όμως δεν είναι "πριν από οποιαδήποτε ενέργεια"
4. Πρότυπα της ΕΤΕΠ
5. ΚΑΝΟΝΙΣΤΙΚΕΣ ΔΗΜΩΝ, ΣΧΕΤΙΚΑ ΦΕΚ, ΣΕ ΑΛΛΕΣ ΧΩΡΕΣ ΠΟΛΥ ΠΛΟΥΣΙΟ ΥΛΙΚΟ ΝΟΜΟΘΕΣΙΑΣ
6. ΕΤΕΠ (Ελληνικές τεχνικές προδιαγραφές)
7. Η ΧΡΗΣΗ ΤΩΝ ΕΤΕΠ ΚΑΘΟΡΙΖΟΥΝ ΤΟΝ ΤΡΟΠΟ ΔΙΑΧΕΙΡΗΣΗΣ ΤΩΝ ΑΣΤΙΚΩΝ ΔΕΝΤΡΩΝ ,ΑΛΛΑ ΧΡΕΙΑΖΕΤΑΙ ΒΕΛΤΙΩΣΗ ΚΑΙ ΕΠΙΚΑΙΡΟΠΟΙΗΣΗ
8. ΕΤΕΠ
9. ΦΕΚ Β 4607/2019
10. ετεπ
11. Οι προδιαγραφές ΕΤΕΠ
12. ΕΛΟΤ ΤΠ 1501-10-06-04-01:2009
13. Direttiva 128/2009/CE, D.Lgs 150/2012, DM 22.01.2014 (ITALY'S NATIONAL ACTION PLAN FOR THE SUSTAINABLE USE OF PLANT PROTECTION PRODUCTS);
14. Legge 10
15. PROTOCOLLI SIA
16. [https://www.mite.gov.it/sites/default/files/archivio/normativa/legge\\_14\\_01\\_2013\\_10.pdf](https://www.mite.gov.it/sites/default/files/archivio/normativa/legge_14_01_2013_10.pdf),
17. Law on C.A.M. - Law 14/01/2013
18. Sve nove zelene površine moraju odgovarati prihvaćeni standardima
19. Law about forests
20. You have to know national and local laws to know what you can or cannot do
21. National standard to take care of monumental trees
22. Not sure where to find them
23. There are no real standards currently. There are however laws in place. Most of the time this only really applies for removals or heavy pruning operations
24. Few cities have a special law for take care of trees, usually something about modern arboricultural practices.
25. must have authorization to cut some species of trees, there are laws that regulate pruning
26. Yes, they are available and no, they don't have to be obliged by the low or even national recommendations.

## ***eu Trees***

27. ETPS 2005, now 2021 in translation
28. Depending on the client
29. Most of them are local, such as city's rules and regulations

**Q10.** Are existing laws requiring any type of certification for urban tree managers?

**Q10a.** If yes, please specify:

1. Πτυχίο γεωπόνου, δασολόγου κλπ
2. ΑΠΑΝΤΗΣΑ ΟΧΙ ΓΙΑΤΙ ΚΑΚΩΣ ΔΕΝ ΕΧΟΥΝ ΣΤΗΝ ΕΛΛΑΔΑ. ΑΛΛΟΥ ΕΧΟΥΝ.
3. Απόφοιτοι Γεωπονικής Σχολής
4. Συνήθως ζητούν ο ανάδοχος να έχει πολυετή εμπειρία στην ανάληψη αντίστοιχων έργων και με συγκεκριμένο προϋπολογισμό
5. minimum environmental contents
6. Odgovarajuća licenca propisana zakonom
7. Norwegian certification, ETW or ISA are required to work on trees for the municipality of Oslo
8. Licence
9. In my city we can work on urban trees just if there is minimum 1 etw in the work area
10. ISA Certified Arborist
11. Emilia-Romagna's law for veteran trees protection requires ETT and ETW certified arborists for tree management

**Q20.** Has climate change negatively affected urban trees and green spaces in your country? **Q20a.** If Yes, please give some examples:

1. Ατελής Φυλλόπτωση Αειθαλών Δένδρων
2. Πτώσεις, ασθένειες, δυσκολίες στην ανάπτυξη τους
3. Μεγάλη καταπόνηση λόγω ακραίων κλιματικών συνθηκών
4. Παρατεταμένη περίοδος ξηρασίας (π.χ. στην Αττική) και ανομβρίας (π.χ. στη Δυτική Greece) που νεκρώνει τα δέντρα που βρίσκονται στα πιο οριακά εδάφη. Επίσης η μεταβολή των χιονοπτώσεων (μειωμένες πιο βορεινά, αυξημένες στην κεντρική Greece) εάν επιμείνει ως φαινόμενο, υποθέτω ότι συνδέεται με την Κλιματική Κρίση. Στα νότια (όπου επικρατούν λόγω και της μεγάλης περιόδου ξηρασίας τα πιο ξηροθερμικά αειθαλή πεύκα) προκαλεί μεγάλο αριθμό χιονοθλασιών.
5. Αύξηση των αναγκών άρδευσης. Περισσότερα σπασμένα δέντρα και κλαδιά λόγω ακραίων καιρικών φαινομένων.
6. Ξήρανση δέντρων ,ιδιαίτερα όπου δεν υπάρχει πότισμα
7. ΚΑΡΑΓΑΤΣΙΑ, ΦΟΙΝΙΚΟΕΙΔΗ, ΝΕΡΑΤΖΙΕΣ
8. Παρατεταμένη περίοδος ξηρασίας, Πλημμυρικά φαινόμενα
9. Και μόνο οι ακραία υψηλές θερμοκρασίες που τελευταία εμφανίζονται, έχουν δυσμενείς επιπτώσεις στην υγεία των δέντρων. Αστικών και μη
10. Καταστροφή από έντονα καιρικά φαινόμενα, έκθεση σε ασθένειες, μη ευνοϊκές συνθήκες ανάπτυξης
11. ΟΧΙ ΑΚΟΜΑ
12. Έχει επηρεάσει την ανθεκτικότητα των δέντρων, προβλήματα από την αέρια ρύπανση, την ξηρασία και την αύξηση της θερμοκρασίας
13. Ο σφοδρός χειμώνας με έντονες χιονοπτώσεις κατέστρεψε πολλά δένδρα

## *eu Trees*

14. Περιαστικές πυρκαγιές, καταστροφές από πλημμύρες
15. Ξηράνσεις, ασθένειες
16. ΠΑΓΕΤΟΣ, ΕΝΤΟΝΕΣ ΧΙΟΝΟΠΤΩΣΕΙΣ
17. 1. Αυξημένες ανάγκες σε άρδευση, 2. ακραία καιρικά φαινόμενα ( έντονες χιονοπτώσεις, δριμείς άνεμοι ) με αποτέλεσμα σπασίματα και εκριζώσεις δένδρων
18. Ακραία καιρικά φαινόμενα
19. Οι ακραίες χιονοπτώσεις και οι ακραίες υψηλές θερμοκρασίες των δύο τελευταίων ετών έχουν προξενήσει μεγάλη καταπόνηση στα δέντρα των πόλεων.
20. Φαίνεται να υπάρχουν περισσότερες απώλειες δένδρων και θάμνων σε δημόσιους χώρους απ' ό τι στο παρελθόν λόγω καταπόνησης από τις υψηλές θερμοκρασίες και την ελλιπή άρδευση.
21. Πτώσεις δένδρων λόγω έντονων καιρικών φαινομένων, ανάπτυξη ασθeneιών, νέες εντομολογικές προσβολές
22. drought and heat waves
23. Alcune specie stanno scomparando, ad esempio ippocastano
24. Stress ripetuti da tempeste, persistente aridità, riduzione periodo freddo,
25. Sea exposition and see Winds... siccità in new implant of Young trees
26. RIDUZIONE DELLE PRECIPITAZIONI E CONSEGUENTE NECESSITA' DI MAGGIOR CONSUMO DI ACQUA, MAGGIORI COSTI PER REALIZZAZIONE IMPIANTI
27. drought stress
28. Tree damage by insolation on leaves an the bark, increase in insect pest populations on urban green, lack of precipitation and long period of drought.
29. sušenje velikog broja vrsta drveća i žbunja, trenutno aktuelno platana
30. Masovno propadanje četinarsa usled povećanja prosečne godišnje temperatura, kao i maksimalnih temperatura
31. After a long drought in 2012, a large number of conifers was died, especially Norway spruces
32. Damages on trees' organs
33. Spreading if pests which endanger trees
34. Increase in tree diseases caused by opportunistic fungal pathogens
35. Some old tree species dissapeared
36. Dry summers. Temperature.
37. Elms seem to suffer from former droughts (like in 2018)
38. Dead Of dome Genus, like Cedrus sp. or Quercus sp.
39. Trunks burnt by the sun/hit/uv rays
40. Hard dry soils that water cannot penerate.
41. Coniferous decorative trees massively died in the last decade.
42. Occurence of some pests
43. drying and diseases of thuja occidentalis
44. The decay of older healthy trees is noticeable. Young newly planted trees have difficulty surviving.
45. The old healthy trees in parks are dying in the last couple of years.
46. Floods, higher temperature in urban area, drying trees, lack of water for irrigation
47. Our coniferous plants suffer
48. Extinction of certain species

## ***eu Trees***

49. Sušenje stabala na zelenim površinama
50. Global warming in combination with insufficient involvement of green spaces in cities, leads to extremely high temperatures in the summer and a bad impact on air quality that is most easily noticed in the winter, due to increased humidity and lower air temperature, we have some form of smog and fog, which in the absence of windy days primarily endangers the health of all citizens but also due to reduced visibility makes life difficult at all levels directly or indirectly.
51. death or suffering of many trees
52. New disease, less rains
53. Siccità
54. Spread of invasive species
55. DAMAGE OF SOLAR RADIATION
56. Oak forests is in problem with less rain
57. Long droughts, late forsts, heavy wind gusts are more frequent
58. Stronger droughts (low growth /resiliance rate), more illnesses...
59. A very long period without rain
60. bor pred knjižnico v Tolminu
61. Some diseases, that were previously held back by cold sumemr night temperatures have the capacity to spread no, when temperatures are higher.
62. Drought, storms,... lowerd trees vitality to a degree that they became succceptible to "pests/ pathogens".
63. Drought
64. icebreaker, windbreaker
65. Some tree species are having problem, pest and desease
66. Nekatere vrste in sorte dreves in grmičevja so bolj dovzetne za boleznii in škodljivce.
67. drying of some tree species in warmer areas.
68. problems with conifers, and increased numbers of diseases and pests
69. In the last years we experienced heavy tornados and heavy drought periods, in some cases not experienced in the last 100 years

**Q27..** Are there any certified training courses like the European Tree Workers and European Tree Technicians or any other national ones in your country (EAC or other certification)? **Q27a.** If Yes please elaborate:

1. GREEN TREE
2. certification issued by the SIA (Italia section of International Society of Arboriculture (ISA))
3. There are two-three different organization that provide training courses
4. ETW, ISA
5. Scuola Agraria Parco di Monza
6. Norwegian trepleieforum is member of the EAC
7. Asociación Española de Arboricultura
8. A school that says that they try to follow the ETW, but they do not
9. Few schools prepare students for the certification. And then we have 3 different centers for do the examination
10. Formazione 3t
11. SKT A, B, SRT by Nuremberger schule

## *eu Trees*

12. Tree care/maintenamce on height
13. Npk
14. Skt
15. Mostly private institutes

**Q29.** Do you have anything else to share on the matter?

1. Ορισμένες από τις ερωτήσεις τις βρήκα δυσνόητες
2. ΝΑ ΓΙΝΕΙ ΚΥΚΛΟΣ ΣΤΑ ΔΙΕΚ (ΠΧ ΣΥΓΓΡΟΥ) ΚΑΙ ΙΓΕ-ΕΙΝΑΙ ΜΟΝΟΕΤΗΣ ΤΟ ΠΟΛΥ ΔΙΑΔΙΚΑΣΙΑ ΜΗΝ ΜΠΛΕΞΟΥΜΕ ΜΕ ΑΕΙ ΚΑΙ ΚΑΘΗΓΗΤΑΔΕΣ
3. για την πατριδα μου, η πανίδα γενικότερα, είναι αγνωστη εννοια
4. Να αποκλειστούν οι ιδιώτες από την διαχείριση δενδρων
5. οχι
6. Training in arboriculture and certification are needed more than ever in order to protect trees in urban environment.
7. No
8. I love you green earth
9. I feel there is a need to spread awareness on the matter of urban trees managing, so that the people will start to understand why it is needed to have competent workers in the field
10. No
11. No
12. -
13. There should be a high expectance of any future tree management education that requires proof of a long practical work life. The generally the best tree consultants are ex climbers who have been working for at least 15+ years. There of course is a few of very good consultants and tree managers who can without having a large amount of practical life. To know trees you have to of worked with trees! Thanks for putting this out on the forum! :D
14. I think there should be fine and police that make sure the laws regarding trees and biodiversity are respected.
15. Thanks a lot for initiatives!
16. I dream that one day somebody will finally see and recognize my work in area of GIS - cadaster of vegetation in urban spaces and that I can finally finish same database for my town. I dream of getting exact map needed for work instead making it on my own and with my limited abilities and to get helper on field instead to work all alone. And I hope that people will finally name our system with correct name. It is not nor ever will be forest. Regards from last person working in my ton on creating cadaster database for public spaces..... Like somebody would ever respond
17. No
18. No
19. I know that more and more people are becoming etw or ett, but id like that also the manager of the green part of the municipality must be certified.
20. Get knowledge to students
21. Thank you for working toward better future for trees and us.
22. Want to send photos. Example: big tree massacre at Habjanov bajar, Ljubljana

23. -

24. No.

COMMENTS WITHIN THE QUESTION:

**Q19.** Do the municipalities in your country have any of the following plans or strategies?

1. Σε επικοινωνία με διάφορους δήμους στο παρελθόν έχω διαπιστώσει ότι άλλοι δήμοι έχουν σχέδια πχ. δένδρων και άλλοι όχι. Δεν είναι στελεχωμένοι (ιδιαίτερα οι μικροί δήμοι) με τις αρμόδιες υπηρεσίες για να το κάνουν.
2. Plant small sorts of trees, cut big trees
3. there are big differences between cities
4. Depends of the city

Annex 2

## **URBAN TREES MANAGEMENT in EUROPE - euTrees**

This questionnaire will help in the development and promotion of an urban tree management education and certification standard across Europe. It will contribute to the needs analysis on education and existing training and certification schemes for the tree handlers, managers and officers.

According to the current legislation for the protection of personal data (i.e., General Data Protection Regulation - GDPR), upon your participation in the survey, your personal information is automatically collected, stored and used only for the purposes of this needs analysis and will not be leaked to third parties.

By participating in the survey, you have been informed about General Data Protection Regulation (GDPR) and you accept the processing of your data.

If at any time you do not wish this information to be collected, stored and used, please notify us immediately at [info@commonsplace.gr](mailto:info@commonsplace.gr) and we will delete it.

### **GENERAL INFO**

Please answer the following:

**1** I1a. Your name:

\_\_\_\_\_

**2** I1b. Your email:

\_\_\_\_\_

**3** I2. Your organization:

\_\_\_\_\_

**4** I3. Country you operate:

- Albania
- Armenia
- Austria
- Belarus



***eu Trees***

- Belgium
- Bosnia and Herzegovina
- Bulgaria
- Croatia
- Cyprus
- Czech Republic
- Denmark
- Estonia
- Finland
- France
- Georgia
- Germany
- Greece
- Hungary
- Iceland
- Italy
- Kosovo
- Latvia
- Liechtenstein
- Lithuania
- Luxembourg
- Malta
- Moldova
- Monaco
- Montenegro
- Netherlands
- Norway
- Poland
- Portugal
- Republic of Ireland
- Republic of North Macedonia
- Romania

**eu Trees**

- Russia
- San Marino
- Serbia
- Slovakia
- Slovenia
- Spain
- Sweden
- Switzerland
- Turkey
- Ukraine
- United Kingdom

**5** I4. Your position:

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**6** Q1. Are you familiar with the terms European Tree Technician and Tree Worker (ETT & ETW)?

Additional Information can be found at the European Arboricultural Council official site: <https://www.eac-arboriculture.com/eac-intro.aspx>

- Yes
- No
- Partially

**7** Q2. Do local municipalities/authorities manage urban trees in parks and green spaces?

- Yes
- No
- Not sure/Don't know

**8** Q3. Can private sector manage urban trees in parks and green spaces?

- Yes

## ***eu Trees***

- No  
 Not sure/Don't know

**9** Q4. Are arboriculture modules specific for urban tree management taught in educational institutes of any level?

- Yes  
 No  
 In an old fashion (obsolete) manner  
 Not sure/Don't know

## **Political, Economic, Social, Technological, Legal and Environmental information**

### Political and Legal info:

**10** Q5. Can higher education institutions and VET providers add an arboriculture education module without governmental involvement?

Information about Vocational Education and Training (VET) providers at <https://www.cedefop.europa.eu/en/tools/vet-in-europe/systems/greece-2019>

- Yes (e.g., just a typical approval)  
 No  
 Not sure/Don't know

**11** Q6. Is it easy to communicate and cooperate with associated ministries and other governing bodies in areas of education and legislation on the topic of urban tree management?

- Yes  
 No  
 Not sure/Don't know

- 12** Q7. Is there a political green agenda in effect that could be helpful for establishing urban trees education and labour - professional rights?

A country's green Agenda is the Implementation of EU's Green Deal ([https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en))

- Yes
- No
- Not sure/Don't know

- 13** Q8. Are there special laws in effect protecting specific urban tree species or urban green areas?

Endangered species acts, protected areas etc

- Yes
- No
- Not sure/Don't know

- 14** Q8a. If yes, please give some examples:

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- 15** Q9. Are national standards/laws concerning tree care/tree management available and have to be considered before any action?

- Yes
- No
- Not sure/Don't know

- 16** Q9a. If yes, please specify:

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- 17** Q10. Are existing laws requiring any type of certification for urban tree managers?

**eu Trees**

- Yes
- No
- Not sure/Don't know

**18** Q10a. If yes, please specify:

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**Technological and Socio-Economic info:**

**19** Q11. Do the pertinent authority that manages the urban trees in your city:

	Yes	No	Not sure/Don't know	Partially
performs tree risk assessments?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
utilises GIS and geolocation technologies for tree management?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
keeps a detailed tree management digital record?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
keeps a digital spatial database of the trees?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
regularly updates that database?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
has that information available to the public?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**20** Q12. Do you believe that in order to manage urban trees effectively:

	Yes	No	Not sure/Don't know	Partially
tree risk assessment is necessary?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
the use of GIS and geolocation technologies for tree management is a	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

necessity?				
a digital tree inventory is a necessity?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
a digital spatial database of the trees is a necessity?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
a detailed digital record of all managing actions is a necessity?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
public availability of the above records is a necessity?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**21** Q13. Do you believe there is a market need for certified tree handlers in your country?

- Yes
- No
- Not sure/Don't know

**22** Q14. Would potential clients (private or public sector) prefer certified tree handlers?

- Yes
- No
- Required by law
- Not sure/Don't know

**23** Q15. Do the citizens acknowledge the need for urban tree protection and appropriate management?

- Yes
- No
- Not sure/Don't know

**24** Q16. Does the public acknowledge the need for urban trees protection in the face of climate change?

- Yes
- No
- Not sure/Don't know

**25** Q17. Are certified personnel in tree care and management trusted by the public?

- Yes
- No
- Not sure/Don't know
- Not applicable

**26** Q18. Are green skills welcome by the public?

Cedefop defines green skills as “the knowledge, abilities, values and attitudes needed to live in, develop and support a sustainable and resource-efficient society” additional info [https://europa.eu/climate-pact/about/priority-topics/green-skills\\_en](https://europa.eu/climate-pact/about/priority-topics/green-skills_en) and <https://www.cedefop.europa.eu/en/projects/skills-and-jobs-green-transition>

- Yes
- No
- Not sure/Don't know

## Environmental info

**27** Q19. Do the municipalities in your country have any of the following plans or strategies?

- Resilience strategy
- Local adaptation to climate change strategy
- Climate action plan
- Air quality plan
- Local recovery plan
- Urban biodiversity plan
- Tree master plan

**eu Trees**

- Green / blue infrastructure plan
- Water management plan
- Soil management plan
- None of the above
- I don't know
- Other

**28** Q20. Has climate change negatively affected urban trees and green spaces in your country?

- Yes
- No
- Not sure/Don't know

**29** Q20a. If Yes, please give some examples:

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**30** Q21. The need for urban biodiversity protection is evident

	Yes	No	Not sure/Don't know	Partially
for you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
by the general public	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
within your institution/organisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
by the local authorities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
in your country's legislation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**31** Q22. The need for best practices in management of urban trees is recognised

	Yes	No	Not sure/Don't know	Partially
by you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
by the general public	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
within your institution/organisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



by the local authorities      
in your country's      
legislation

**32** Q23. Do you believe there is a lack of experienced and/or adequately trained personnel in the local municipalities or other pertinent authorities' responsible for urban trees management?

- Yes
- No
- Not sure/Don't know

### Educational info

**33** Q24. Does your country comply with ECTS and EQF standards for education?

For additional info you can visit: EQF: <https://www.cedefop.europa.eu/en/projects/european-qualifications-framework-eqf> ECTS: <https://education.ec.europa.eu/levels/higher-education/inclusion-connectivity/european-credit-transfer-accumulation-system>

- Yes
- No
- I am not sure they are implemented
- Don't know

**34** Q25. Do education institutes of various levels in the field of arboriculture exist in your country?

- Yes
- No
- Not sure/Don't know

**35** Q26. Are environmental and green skills education programs available in VET providers or higher educational institutes?

**eu Trees**

- Yes
- No
- Not sure/Don't know

**36** Q26a. If you answered yes, are they in demand by students?

- Yes
- No
- Not sure/Don't know

**37** Q27. Are there any certified training courses like the European Tree Workers and European Tree Technicians or any other national ones in your country (EAC or other certification)?

- Yes
- No
- Not sure/Don't know

**38** Q27a. If Yes please elaborate:

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**39** Q28. Do you believe that new expanded European Tree training for Urban Green Officers (people responsible for managing urban nature) is needed at the moment?

- Yes
- No
- Not sure at the moment

**40** Q29. Do you have anything else to share on the matter?

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Thank you for your time!