



FAQ's

I+ Trainer Software

Contents

1) What type of tablets/mobile device can I use?	2
2) How to install the I+ Trainer to your mobile device?	2
3) Best performance for running the I+ software	4
4) How do I load a Marteloscope site to my tablet?	4
5) How to save my results of an exercise?	5
6) What if my tree selection screen shows each tree number twice ('doubling effect')?	5
7) What if my I+ Trainer application freezes/crashes during an exercise?	6
8) Where do I find my exercise results that were saved as a pdf?	6
9) Can I save exercises offline and later upload them to Central I+ Database once I have Internet connection?	7
10) Can I export my exercise results into other file formats for further use/processing in other programmes (e.g. csv, xml etc.)?	8
11) Where do I find the tree microhabitat codes description?	9
12) 'Silviculture Module' in the I+ Trainer software	9
13) Where do I find quick background on Martelosscopes, their design collected data and calculation methods for tree microhabitat points, tree quality assessment (volume/economic values), tree microhabitat catalogues etc.?	10



Below a set of questions and answers of frequently occurring requests when getting ready to install the I+ Trainer software or while implementing Marteloscope exercises. Note that this list is open and new questions will be added as the occur. Please feel free to contact us if you have any other questions. We can then add those with an answer to the FAQ's list.

1) What type of tablets/mobile device can I use?

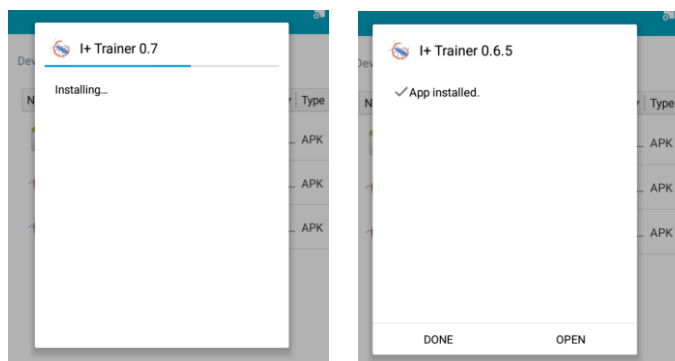
The I+ Trainer runs on Android. The recommended minimum Android version is 4.4. The application may not run well on the older versions. The recommended processor is a quad-core ARM processor. The minimum RAM to run the application is 1 GB. However, it is known that the PDF creation may not work well on 1 GB RAM devices. The recommended minimum screen resolution is 1280x800. Our users have found 7-8" screens to be suitable, although small but therefore comfortable to use.

The I+ Trainer runs also on an Intel processor, but some feedback reports noted problems with the tree selection map. This may be related to the specific Android version. Another tablet model might run the I+ Trainer well. We have made good experiences with following tablets which we have tested and used: Samsung Galaxy Tab Active, Google Nexus and Sony Xperia. This does not mean that other tablets will perform perfectly well. A Windows based tablets version is currently being developed. Information will be added under FAQs as soon as it becomes available.

2) How to install the I+ Trainer to your mobile device?

- **Which version to choose for download?**

Go to the 'Iplus Software Store' webpage at iplus.efi.int and open the I+ Software download page. For details on what mobile devices can be used for downloading the I+ Trainer see [FAQ 1](#). You can then either download the software directly to your mobile device or first to your desktop. From the desktop you can then further transfer to suitable mobile device(s).



Once you activate the download, the I+ Trainer will normally be saved to your folder 'downloads'. You should check which I+ Trainer software version you should download based on the operating system of your mobile device. Mobile devices running Windows operating system do not yet allow to apply the I+ Software. This is work in progress.

- ARM Processors (Android operating system)
- Intel processors (Android operating system)
- Windows operating system (under construction)

Before installing the I+ Trainer there are a few more things you should be aware of!

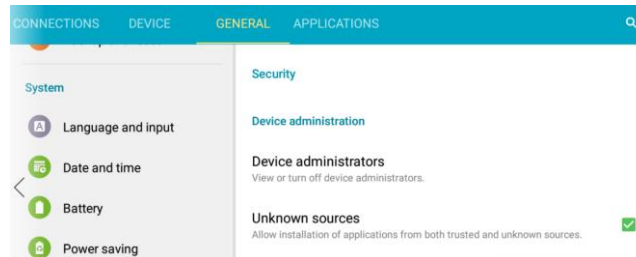


06/12/2018



- **Does device allow download from unknown source?**

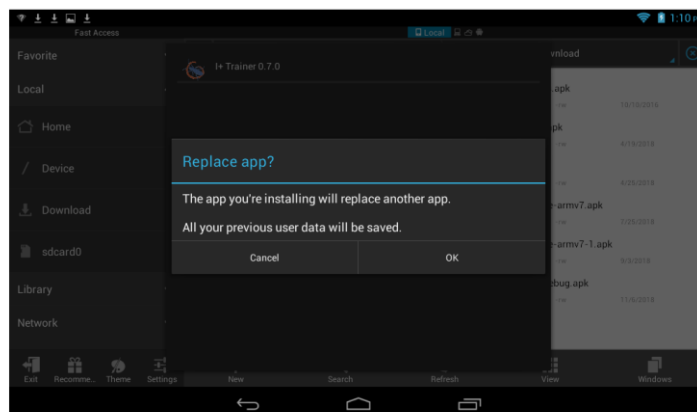
Go to 'settings' and check if your device allows to install applications from 'both trusted and unknown sources'. You will need to allow this. Now you can start the installation process. You will be notified once the app is installed. You can then either press 'done' (leave page) or directly use the I+ Trainer app by pressing 'open'. Once the I+ Trainer is installed remember to go again to 'settings' and deactivate 'install applications from both trusted and unknown sources'.



- **Is the I+ Trainer already installed?**

Different version name: If you have already installed the I+ Trainer (e.g. version 0.6.5) you can install a second one as long as it is a version with a new name (e.g. version 0.7.0). A new version name is usually given after major revisions. It is possible to have two different I+ Trainer versions on your tablet.

Same version name: If only smaller updates are made the name will stay the same. You should then first de-install the version on your mobile device before installing the new one. Why do this? The new version may not fully overwrite all features of the old one and so negatively affect app performance. If you do install an updated version with the same name (e.g. version 0.7.0), and did not de-install the previous one, you will get the following notification 'The app you're installing will replace another one'. Press cancel and first de-install the old Trainer (see next bullet on how to de-install) and then continue.

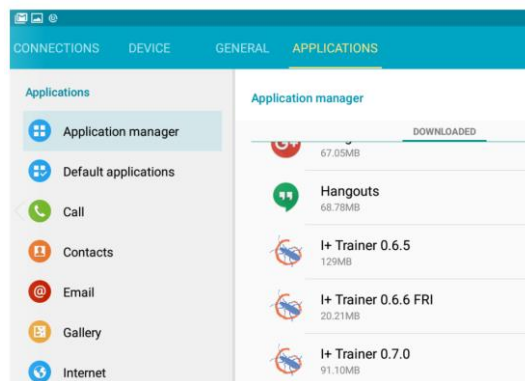


- **How to de-install the I+ Trainer**

You need to go to 'settings' on your device and open the tab 'applications'. There you will find besides other apps the I+ Trainer and the version that you want to delete.



06/12/2018



3) Best performance for running the I+ software

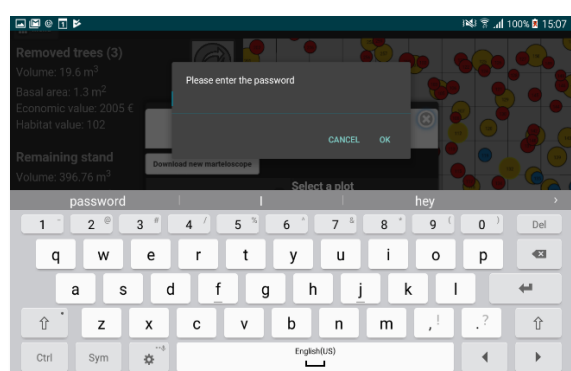
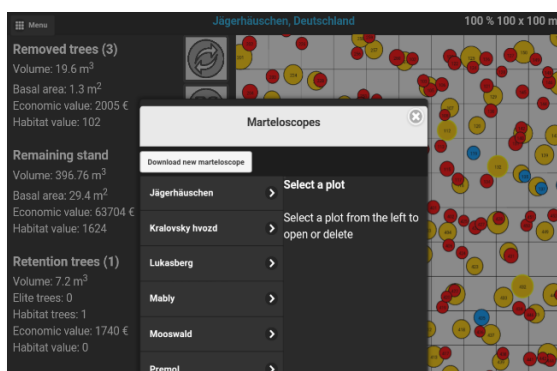
Best performance is achieved if you:

- have no other applications open on your mobile device during the use of the I+ software
- have your screen locked in 'landscape mode' (meaning the screen will not rotate when you move the device around) and

4) How do I load a Marteloscope site to my tablet?

The way you load a Marteloscope to your tablet works as follows:

- Access the webpage iplus.efi.int
- Download the I+ Trainer based on the type of tablet you have (see also FAQ 1). You can download the I+ Trainer first to your PC and then transfer the software package to your tablet, or load it directly to your tablet.
- Once installed select the Tab 'download new Marteloscope'
- Enter the 'password' given to you for the training event. The Marteloscope can then be downloaded to the tablet.
- If you have no password, please contact either (1) the organiser of the training event, (2) the Marteloscope contact person (<http://iplus.efi.int/documentation.html>) or (3) the EFI Bonn Office at adminbonn@efi.int

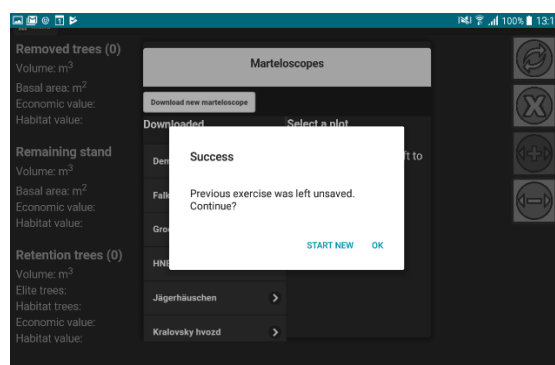
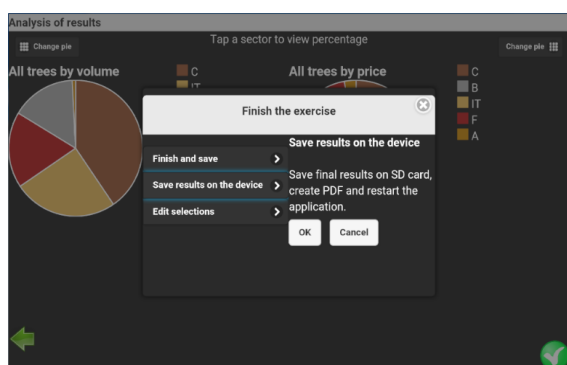




5) How to save my results of an exercise?

There are the following options in software versions newer than '0.6.5' when you have finished your exercise. At the end of the exercise results path you can:

1. **Finish and save** (save results to I+ central database, create a pdf of the final results and restart the application)
 - This means that you can save exercise results directly to the I+ central database. This works only if you have Internet connection in the field. If not, you can save exercises on your device and upload them later to the I+ Database once Internet connection is available (see also next option and [FAQ 9](#)).
2. **Save results on the device** (save final results on SD card, create a pdf and restart the application)
 - This is the option for saving exercise results offline (for details see also [FAQ 9](#)). Pressing 'OK' will start the saving process. Enter a name and press again 'OK'. Here we advise the use of a person's name performing the exercise. The PDF is now created and you are informed of the success. Note that the saving process may take some time.
 - If there occurs a problem during the saving process (e.g. it keeps processing), you have the following option. Close the I+ Trainer application and restart it. You will be asked if you want to start a new exercise or 'OK' which means to open your previous exercise. Choose again 'OK' and go through the 'exercise results' menu once more. Then try to save your results once more.
 - You can also directly open your file as a 'PDF'. If that does not work you can open the 'PDF' file directly from your file manager.
3. **Edit selections** (continue editing selections without saving)
 - This means that you can press 'cancel' this option and chose options 1 or 2. You can also return to the tree selection map to edit your current selections by pressing 'OK'. Once you have made further selections in the tree selection map you again go through the 'exercise results' section and then save your results.



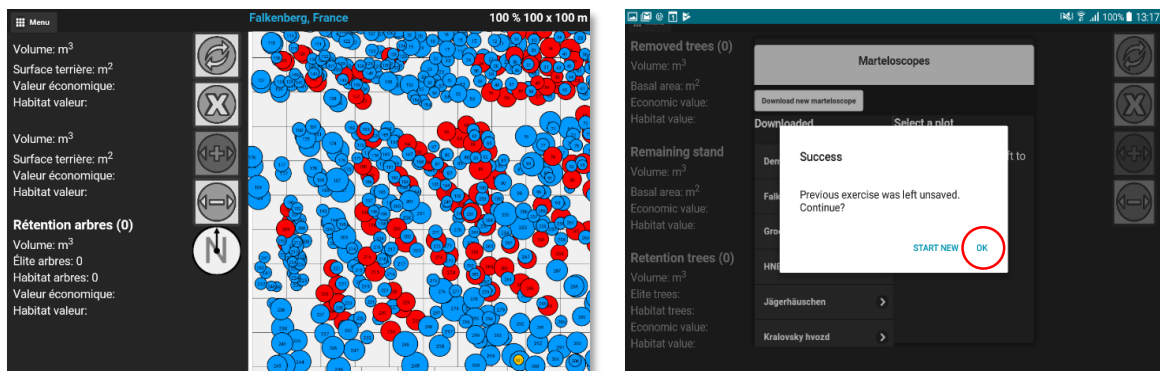
6) What if my tree selection screen shows each tree number twice ('doubling effect')?

If you experience a 'doubling effect' (see image below) during an exercise do the following:

- Close the I+ Trainer application and restart it.
- Select the 'OK' button and you will return to your tree selection screen with the previously selected trees still visible
- You can then continue with your exercise
- You can minimise the doubling effect if you follow tablet settings presented under [FAQ 3](#)



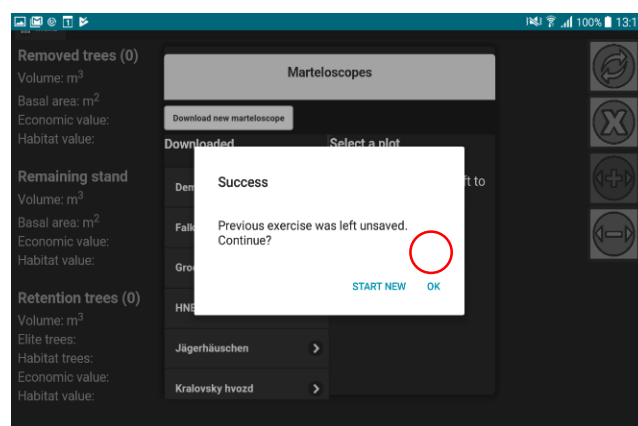
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7) What if my I+ Trainer application freezes/crashes during an exercise?

If your I+ Trainer software freezes/crashes during an exercise do the following:

- Close the I+ Trainer application and restart it
- Then select 'OK' button and you will return to your tree selection screen with the previously selected trees still visible
- You can then continue with your exercise

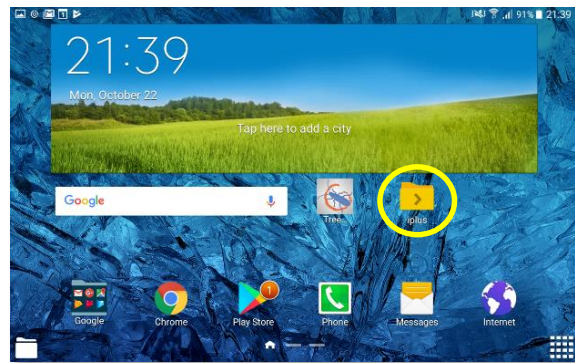
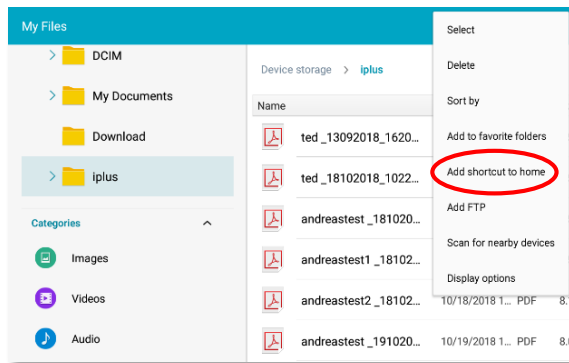


8) Where do I find my exercise results that were saved as a pdf?

Once the results are saved they will be stored in the internal storage of your device. This will depend on what type of tablet you have and how the internal storage is set up. The I+ Trainer creates its own folder named 'iplus', to which it saves the PDF files. You will have to check where the 'iplus' folder is created in your device. In the Samsung tablets we use PDF files are saved under 'My files -> 'device storage' and folder 'iplus'. If uncertain please check with your IT manager or consult tablet software help function in your tablets. Once you know where files are saved you can also set a shortcut to the folder using the 'add shortcut to home' function. Then you will find the link on you home screen, usually bottom left corner.

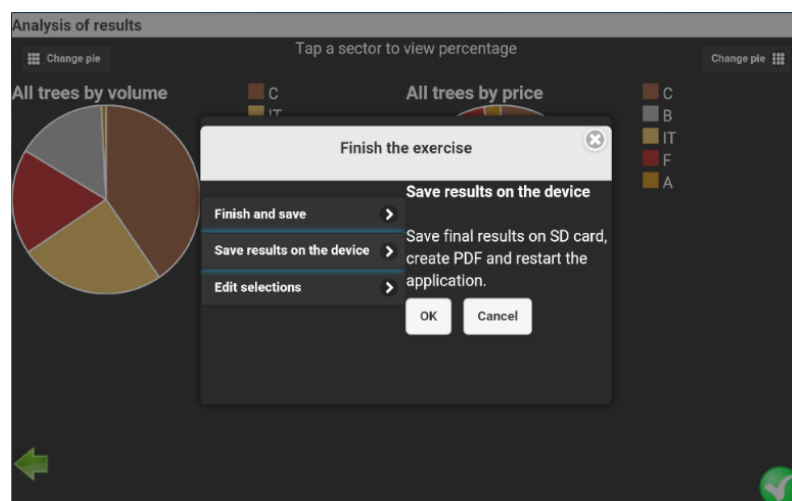


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9) Can I save exercises offline and later upload them to Central I+ Database once I have Internet connection?

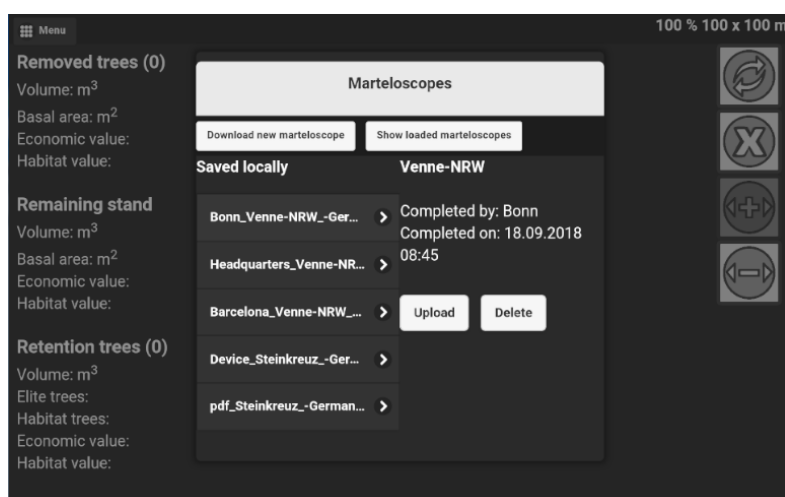
Yes. I+ Trainer software applications newer than version '0.6.5' include this feature. Please chose the second option to finish the exercise (see also [FAQ 5](#)) named 'save results on the device'. In addition to the creation of a 'PDF', the results of the exercise are saved locally.



The 'plot management dialog' (Menu -> Marteloscopes) has a button 'upload exercise results'. This will show you the list of all exercises that have been saved locally. For each exercise waiting to be uploaded to the central I+ Database you will see information on: *exercise name provided, the Marteloscope name, date and time when saved locally*. Depending on your decision, you can either upload the results to the central I+ Database or delete the exercise entry. **Make sure that if you plan to upload the exercise result(s) to the central I+ database that you have Internet connection!**



06/12/2018



10) Can I export my exercise results into other file formats for further use/processing in other programmes (e.g. csv, xml etc.)?

Yes. In I+ Trainer software applications newer than version '0.6.5' this is a default feature. It is available when you save your results locally (see also FAQ 9). A file with the extension 'CSV' (comma separated values) is created simultaneously when saving the exercise results in 'PDF' format. The 'CSV' file is written/saved to the same folder as the PDF file (see also FAQ 8).

The file names that are created when saving an exercise are standardized as follows: 'Name_Plot_Country_Date_Time.csv':

The 'CSV' file format is accepted by wide range of analytical and data management software. Other export formats will be added (e.g. 'XML') and described once available.

How to use the Excel sheet:

The columns "O" and "P" are those displaying if a tree has been subject to selection during an exercise.

A	B	C	D	E	F	G	H	I	J	K	O	P
tree_id	species	x_coord	y_coord	dbh	height	BA	volume	status	eco_val	economic_val	action	reason
22	Picea abies	39.83	45.43	62	26	0.3	3.69	alive	0	166.02	2	10
118	Fraxinus excelsior	10.41	21.32	61	28	0.29	3.85	alive	0	211.05	2	10
94	Picea abies	22.68	46.8	61	24	0.29	3.3	alive	4	169.95	2	10
100	Fraxinus excelsior	12.92	39.64	59	28	0.27	3.6	alive	0	206.91	2	9
223	Picea abies	20.36	81.81	56	27	0.25	3.13	alive	24	143.42	2	9
270	Picea abies	3.43	51.45	56	28	0.25	3.24	alive	24	166.62	-1	-1
165	Picea abies	39.62	50.27	55	25	0.24	2.79	alive	24	142.98	1	4
125	Picea abies	10.34	51.35	52	28	0.21	2.8	alive	24	143.39	-1	-1
208	Picea abies	24.56	56.66	51	26	0.2	2.5	alive	0	128.69	1	3
153	Picea abies	45.85	93.16	51	25	0.2	2.4	alive	24	123.78	2	10
85	Picea abies	24.01	9.11	51	27	0.2	2.59	alive	0	133.19	2	8
202	Fraxinus excelsior	24.6	91.85	51	28	0.2	2.69	alive	24	167.1	2	7
147	Picea abies	45.58	60.73	50	27	0.2	2.49	alive	0	128.3	2	10
155	Picea abies	43.14	87.25	49	26	0.19	2.3	alive	0	118.95	1	1

Column "O" ("action") gives you the type of activity performed for a particular tree: "no action" "retention" or "removal". Column "P" ("reason") lists the corresponding reason for removal or retention. Find below the corresponding numbering codes for "action" and "reason".



Column "O" - action	Column "P" - reason
No action: "-1"	No reason: "-1"
Tree selected and again unselected: "0"	Trees selected and again unselected: "null"
Tree removal = "1"	
	"1" = Target diameter
	"2" = Competitor
	"3" = Structure
	"4" = Regeneration
	"5" = Sanitary
Tree retention = "2"	
	"6" = Elite tree
	"7" = Seed tree
	"8" = Diversity
	"9" = Veteran tree
	"10" = Habitat tree.

11) Where do I find the tree microhabitat codes description?

Due to limited space on the tablet screen only the tree microhabitat codes are visualised (e.g. CV11 IN13, EP12 etc.) in the I+ Trainer software. You can use either the digital PDF or a printed version of the 'Tree Microhabitat Catalogue'. You can find it at: <http://informar.eu/tree-microhabitats>

Tip: If you don't want to take a printed version with you, save the pdf of the 'Tree Microhabitat Catalogue' to your tablet. You can also download the interactive tree microhabitat App to your mobile device tablet/phone. Available at Google Play/iTunes:

<https://play.google.com/store/apps/details?id=efi.integrate.microhabitats>

<https://itunes.apple.com/us/app/i+-trems-app/id1159818716?mt=8>

12) 'Silviculture Module' in the I+ Trainer software

What variables are shown?

This applies only to I+ Trainer software versions run the silviculture module. It can only be applied if the corresponding data has been collected/provided for a Marteloscope. The parameters are: (1) *site suitability*, (2) *tree species composition with emphasis on rare species*, (3) *stability* and (4) *regeneration*.

Where tables are shown in the I+ Trainer software?

There are four related tables in the I+ tablet software that display the silviculture variables. The first table is found under the 'silviculture tab' where the information for the whole Marteloscope site is documented. Three tables are then found under the 'exercise result tab'. They are built in the same way as the exercise result tables for stand data and tree microhabitats (before and after intervention, removed trees). All tables present the silviculture variables based on the number of trees by tree species.

Silviculture variables						
Tree species	Count	Rarity [%]	Regeneration+ [%]	Regeneration- [%]	Stability based on H/D	Suitability [%]
common beech Fagus sylvatica	13	100	0	0	92	100
hornbeam Carpinus betulus	129	0	0	0	83	100
sessile oak Quercus petraea	75	0	12	0	50	100
Plot	217	5.99	4.15	0	72	100

**What is presented in the tables?**

The first column ('count') displays the number of trees by species (before, removed, after). All variables in the following columns ('rarity', 'regeneration', 'site suitability') with the exception of 'stability', show the percentage of the trees indicated in the first column 'count' having the variable value equal to 1. The figures represent the proportion of trees, in percent (%), 'keeping' the corresponding silviculture property. The variable 'regeneration' is split in two columns i.e. those trees favourable (regeneration+; value +1) and those unfavourable (regeneration-; value -1) for regeneration. Favourable may be trees you want to utilise for regeneration purposes (seed trees), while unfavourable trees can be e.g. shading trees, unwanted tree species in your regeneration or invasive tree species. Note that many trees in a stand may be given a zero ('0') value for regeneration as they are not relevant/indifferent in this phase of stand development.

Silviculture variables						
Tree species	Count	Rarity [%]	Regeneration+ [%]	Regeneration- [%]	Stability based on H/D	Suitability [%]
common beech	12	100	0	0	94	100
Fagus sylvatica						
hornbeam	126	0	0	0	83	100
Corylus betulus						
sessile oak	65	0	6.15	0	51	100
Quercus petraea						
Plot	203	5.91	1.97	0	73	100

Silviculture variables						
Tree species	Count	Rarity [%]	Regeneration+ [%]	Regeneration- [%]	Stability based on H/D	Suitability [%]
common beech	1	100	0	0	74	100
Fagus sylvatica						
hornbeam	3	0	0	0	76	100
Corylus betulus						
sessile oak	10	0	50	0	42	100
Quercus petraea						
Plot	14	7.14	35.71	0	52	100

The variable 'stability' is based on the relation of tree height ('H' in meters) to the diameter breast height ('D' in cm), in short, the 'H/D relation'. The 'stability' column displays the average value of stability for the given trees of each species before and after the intervention as well as for those trees removed. The last row ('area') provides the identical information but now for all available tree species (before, removed, after).

13) Where do I find quick background on Marteloscopes, their design, collected data and calculation methods for tree microhabitat points, tree quality assessment (volume/economic values), tree microhabitat catalogues etc.?

- Kraus, D., Schuck, A., Krumm, F., Büttler, R., Cosyns, H., Courbaud, B., Larrieu, L., Mergner, U., Pyttel, P., Varis, S., Wilhelm, G., Witz, M., Zenner, E. and Zudin, S., 2018. Seeing is building better understanding - the Integrate+ Marteloscopes Integrate+ Technical Report. Marteloscopes (2018) 26:3.
https://www.researchgate.net/publication/323018962_Seeing_is_building_better_understanding_-_the_Integrate_Marteloscopes
- Marteloscope information sheets and field guides: <http://informar.eu/marteloscope-sites>
- Technical reports: <http://informar.eu/project-documents>
- Marteloscope contact points: <http://iplus.efi.int/marteloscope-data.html>