

# eLTER Sites and eLTSER Platforms Cost Survey (Questionnaire and SO Cost application) FAQs

Work package no	WP4
Nature of the document	Internal working document, please add your questions below, especially after reading the eLTER Sites and eLTSER Platforms Cost Survey Guide
References	eLTER Sites and eLTSER Platforms Cost Survey Guide, eLTER Site and eLTSER Platform Cost Questionnaire and eLTER SO Cost application
Reviewed by	Task 4.1 Leader
Version	1.0

FAQs for eLTER Site/Platform Cost Questionnaire (Scroll below to see FAQs for eLTER SO Cost application)

# The Deadline has been extended to May 24.

Question 01. Why is the Cost Survey needed?

Answer. Financial planning of eLTER Research Infrastructure (RI) starts with the cost estimation of eLTER RI. The costs to be estimated for the eLTER RI comprise all the expenditures over the entire life of the RI (see Fig. below). The Cost Survey includes an online questionnaire, which is designed to collect information from all potential eLTER Sites and eLTSER Platforms that are planning to be part of the eLTER RI. In addition, the Survey includes the eLTER SO Cost application, aimed at estimating the current capital value and the needed upgrading costs for Sites to perform the required Standard Observations in a selected habitat and Site Category.

Question 02. Multiple organizations are responsible for the Site/Platform, which one to add? Answer. Write in the notes that your site is run by multiple organizations, but in the specific field you should add the main organization.

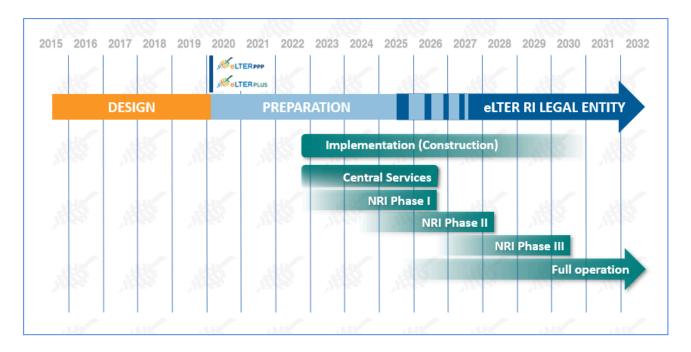
Question 03: we already started....but let me be clear; all of these costs are just to present them as average costs (or actual costs) for different sites to our governments (to get money from?)

Answer. A better understanding of the costs (where and why they are needed) is helping the SPCs to

communicate the needs for maintaining the funding for Site and Platform operations and upgrading them to match the Category requirements. When the results from all Sites and Platforms are pooled together, the ministry representatives in the Interim Council will see how much funding the implementation and planned operations will be requiring.

Question 04: Yesterday a colleague reported to me that the upload in e-lomake did not work. The selected Excel files are indicated in the form, but when starting to save it says that no files are selected. Martin Wilmking already sent an email. Any idea about it?

Answer. We have received similar notifications by e-mail. So far, we checked and it seems to have no issue running on Chrome web browser. Please try cleaning the cache as well. It might have been some temporary bug, so we are kindly asking to check again to see if the error persists. In any case, the excel sheets seem to be stored ok although the system gives you an error message. If the problem is not solved, please send your excel sheet(s) directly to <a href="mailto:ashraful.alam@helsinki.fi">ashraful.alam@helsinki.fi</a> before the deadline, and indicate in the email that the reason is you could not upload them.



Question A1. What does the Cost Survey look like?

It has three parts: the basic information (a simple e-form asking the background information), the Excel Template for General costs, and the Standard Observations App.

The General implementation and operation costs supporting the site operations as eLTER Site or eLTSER Platform are collected with the excel templates, including following sections:

Basic Information of the Site/Platform

Implementation costs supporting the Site/Platform operations

Operation costs supporting the Site/Platform operations

Decommissioning costs after closing the Site/Platform operations

These Excel sheets should be filled in and uploaded as attachments to the e-form.

The online application (eLTER SO Cost application) is used for collecting the costs related to performing the Standard Observations at Sites, and includes the table you need to download from the

application and upload into the e-form of the survey.

Question A2. Who is responsible for filling-up this questionnaire?

Answer. Site and Platform Coordinators (SPC¹). For some of the information, assistance from persons knowing the Site/Platform cost accounting may be needed.

Question A3. Do we need to calculate 'average annual value' OR 'total overall value'?

Answer. • Implementation cost is given as annual values for the years needed (2024 – until 2028) • Operations cost is average annual value • Decommissioning cost is the total overall value after the life-cycle of RI (as per current practice, including implementation phase, initial eLTER RI life-cycle would be 25 years if eLTER becomes an established ERIC). In the survey, this timeline does not need to be specified.

**Question A4.** My Site/Platform has existing premises and fixed installation. Should I do the costing for these existing facilities in the implementation phase?

Answer. YES. In case of premises / fixed installation already available, their total costs are considered as **capital value** and should be allocated in the first year (2024) of implementation phase.

**Question A5**. My Site/Platform is co-located with other RIs. How do I calculate costs? Answer. You have to allocate/apportion the costs among all the co-located RIs in each site/platform. Cost allocation should be done for all three phases (Implementation, Operation and Decommission). Use your estimates if no accurate numbers/shares are available. Mark this in the Note text box.

**Question A6.** In the Implementation Costs section, I can see both 'Building & Construction' and 'Space Rental'. Should I cover both items?

Answer. YES or NO, depends on your existing infrastructure. For example, if you have existing infrastructure, their total costs considered as capital value should be allocated in the first year (2024). For the rest of the years (2025-2028), if applicable, you may provide rental cost if there is no new construction over these years. In case there is new construction, please provide their cost in respect to construction years.

Question A7. I do not find the right/correct category of 'Personnel' for my sites/platforms.

Answer. Category of 'Personnel' is generic because position and salary structure varies a lot between countries. Therefore, based on your country's salary structure, try to allocate the personnel within the three mentioned categories of personnel. For the cost book, cost estimation is more important than titles of personnel. You can use the Note text box to clarify how you estimated the salary or describe the category of personnel.

**Question A8**. Should the 'Overhead Cost' be included in the salary for 'Personnel'? Answer. NO. Salary costs for Personnel only include the gross salary and the social security costs (normally pension and health insurance).

**Question A9**. Is this estimate binding, i.e., do I need to have already secured funding to run the Site/Platform?

Answer. NO, it is not binding. This cost estimation will not have any direct influence on your country-level eLTER RI site-selection process, and it is not legally binding. However, you can use the results as justification, when negotiating the future funding with your organisation or ministry. No secured funding is required to respond to this questionnaire.

<sup>&</sup>lt;sup>1</sup> Site and Platform Coordinator; the persons responsible for managing, operating, steering or coordinating the activities at eLTER Sites and eLTSER Platforms.

**Question A10**. My Site measures many variables that do not belong to eLTER Standard Observations (SO) requirements. Should I include them in the cost estimation?

Answer. No. A Site/Platform may have many variables measured especially when the Site/Platform is running for a long time or is co-located. Costs should include ONLY for the variables measured on Site/Platform that belong to the selected Category of eLTER SO requirements.

Question A11. Should I use only certified costs, or are estimates acceptable?

Answer. Certified costs may not be available for all items; therefore, best estimates are also welcome in case of unavailability of certified costs. Remember to mark the source for information in the Column L of each row.

**Question A12**. Do the Platform costs also include the eLTER Sites embedded in the eLTSER Platform?

Answer. We encourage you to make as detailed specifications as you consider necessary and fill the survey separately for a Platform and a Site located in it, whenever its activities (or ownership) can be separated from the Platform activities. Remember to indicate in the Note text box (in Basic Information e-form) that the Site belongs to 'XX eLTSER Platform' as well. This allows also later separating the cost estimates of the eLTSER Platform from the Sites, or pulling together the Platform costs from the enclosed Sites, if needed.

**Question A13**. Decommissioning may take place after e.g., two decades or even longer. Is it realistic to extrapolate these costs now?

Answer. The decommissioning costs are anyhow very uncertain and hopefully are 'never' realised. In the survey we do not give a timeframe for the decommissioning and anticipate that to happen only if the organisations cease to be committed to sustained support and there is need to secure the existing data for future uses. Additionally, we are following ESFRI guidelines of RI cost estimation. Forthcoming RIs that become ERIC in near future are following ESFRI guidelines. Please have a look at ESFRI document, Section 4.2.5 Decommissioning and end-of-life costs.

Question A14. Do travel items include per diem?

Answer. Yes, if per diem is paid by the organisations.

Question A15. Should there also be a category for depreciation cost of equipment reflecting the amount needed to sustain the level of equipment/infrastructure each year?

Answer. No, estimates must report the real costs/prices without considering accounting methods like depreciation (See guide book, page 2)

Question A16. Where do you put the costs for the laboratory analysis of the samples?

Answer. The Cost template excel does not include these costs. The SO Cost application includes costs for sample analysis.

Question A17. Where do you put the costs for expensive instrumentation repair, loss of data during data collection and cost of insurances (cars, buildings, etc.)?

Answer. The instrument maintenance and repair costs are accounted for in the SO Costs application. Basic insurances, data storage etc should be included in the survey (excel template) itself.

**Question A18**. Considering the differences in salary costs when transforming FTE in currency, you will have large differences in budget needs depending on where the site is located. So, comparing FTE can bring a bias if you use a cross European average salary cost?

Answer. Cost estimate is standardised. It means that, especially for some items, the main focus is on the required units of resources more than on their monetary value, to by-pass significant differences from

country to country. However, we can also convert the FTEs to currencies by using the country-specific information available.

**Question A19.** The country numbers should not go out before the National Coordinators have had the chance to comment.

Answer. The information (based on the submitted cost estimates for the Sites and Platforms) provided is truly internal and NOT definitely public. The following note was provided during circulation of Cost Survey:

DISCLAIMER: Please note that this Cost Survey will not have any influence on your country-level eLTER RI site-selection process, and it is not legally binding. These analyses will provide support for both Sites, Platforms and the eLTER RI by supporting readiness to join in eLTER RI, and may also help in securing future funding from national and international agencies.

# Q A20 moved to SO App section

Question A21. When filling in the questionnaire, is it possible to save and continue at a later time point? Or do you lose all info if you cannot finish in one go?

Answer. You can partially submit your response and your answers will be saved. Later you can complete the questionnaire by using the link that you received via email. NOTE that without selection of "Partial submission" your input data will not be saved! You can start filling in at a later stage ONLY if you selected "Partial submission" and saved the data.

**Question A22.** The information about this questionnaire was sent to all Sites and Platforms registered in DEIMS. Do Sites that will remain Cat 3 have to fill the questionnaire?

Answer. Cat 3 sites are at the moment not included, since they will not be required to follow the SO protocols. However, the sites that are considering becoming Cat 1 or Cat 2 in the near future will benefit from the tool, to get a better understanding of the reality of costs for upgrading. We advise to anticipate what the status is in 2-3 years time.

Question A23. Is it compulsory to fill in the decommissioning phase if the cost is unknown? Answer. The decommissioning costs are of course very uncertain, therefore this phase contains only a few pieces of information that we would like to get from you. They will be estimates in any case. This

few pieces of information that we would like to get from you. They will be estimates in any case. T includes e.g. recycling of fixed installations, demolishing the constructions, and securing the data.

Question A24. For Sites that already have some sensors installed, do we have to put the corresponding investment cost in the implementation cost? And if yes, do we have to provide the 2024 cost (the price that we would have to pay now to get the same sensors)?

Answer. The 2024 cost is the 'Capital value' and we need to get the investment at the time when you purchased it. Estimates need to be reported as the real costs/prices without considering accounting methods like depreciation.

Question A25. I'm unsure what to count in the Fixed Installations. Where can I find some more information about the different types of installations? The measuring tower would be especially interesting.

Answer. The Fixed installations refer to the different structures that are needed for the Site/Platform operations. The need for these varies depending e.g., on the habitat, Site/Platform category, and location of the Site/Platform. For instance, at some Sites a container for housing the analysers is needed, or building a boardwalk for protecting the ground vegetation. A measuring tower refers to a structure needed e.g. for Eddy Covariance measurements above the vegetation (see SOATM\_176 and SOBIO\_090, prime method).

Question A26. For the categories of personnel, there are only "personnel (management/admin)" for years 2024-2028 and then "personnel (scientist/technician)" only appear in the decommission phase. Does that mean that we should not count any time of scientific/technician people during the installation and operational phase??

Answer. That's right. For Sites the scientific staff needed for operations is included in the SO Costs app. For Platforms, the current estimate is that they will require scientific staff, but this will be clarified later and the need should not differ between the Platforms.

Question A27. Do I answer based on the current Site/Platform Category, or the anticipated future category?

Answer. Both. The year 2024 should reflect the situation right now. And the following years will then include costs that are required when your Site/Platform is upgraded to the Category you have planned to be labelled.

Question A28. In the questionnaire, I do not see where we can provide the cost of existing sensors required to acquire the Standard Observations when they are already in place. Only buildings or fixed infrastructure like flux tower or roads are mentioned. Or is this cost not considered in the survey? Answer. The cost survey questionnaire is not asking the same things as the app. Buildings and other 'fixed installations' are not directly linked to any single SOs, so they are asked for in the questionnaire. The existing sensors will come up for us from the App in the 'deselected' sheet.

**Question A29.** I do not see where it is possible to provide the cost for the acquisition of already existing SOs (lab analyses, personal cost, etc..)?

Answer. These cost items are included in the SO app so they are not added in the Excel template, which is only focussing on the general operational costs of the site itself. The costs for existing SOs will come up for us from the App in the 'deselected' sheet.

**Question A30**. Our economist asks regarding the general cost estimates and the 3.2.1 Implementation. Can investments made prior to 2024 be included, if the depreciation is ongoing?

Answer. The investments before 2024 should not be depreciated. It was decided that the year 2024 is considered as the 'year zero', and all installations that have been purchased before that should be placed in that year as if they would be purchased now. This forms the 'Capital value' for the Site/Platform, and any upgrades taking place after that are considered implementation costs.

Question A31. The questionnaire assumes that implementation will take place over 5 years (2024-2028). However, if a site has finished its implementation for instance in 2024, are the cost provided for 2025 to 2028 already the operation cost?

Answer. The implementation can take place over one or more years. If it is finalised by 2026, the rest of the years for implementation can be left empty. Then the operations phase starts in 2027. But to make sure that there is sufficient time to cover the Sites that are not yet so ready, we added the years until 2028

**Question A32.** Is it correct that operation costs are from 2029 onward? Answer. See the answer in Q31.

Question A33. Is it possible to duplicate lines for instance if you want to have one line for electricity, another one for gases for 5.3 Utilities?

Answer. For the purpose of working with the excel afterwards, it is not recommended to add lines, but do the summing of items offline and only add the summed number in the excel. You can use the Col M to mark which cost items were summed.

Question A34. If I understood correctly, the web application for computing the cost of the SOs only takes into account the time needed to do the measurements, once the personnel has arrived on the site. As sites are generally located at several hours from the laboratory and there are security constraints (like the fact that one single person is not allowed to go alone to the field), we must add somewhere the time needed for travelling. This is currently not possible, except if it can be included in the personnel (management/admin) staff. The "travel" line can account for the cost of kilometres and lunches, but not for the staff.

Answer. The travel needed to go to the site should be going to the excel, either 'Implementation' or 'Operational phase' and it should include the costs incurred in real (as they are claimed when they make the travel requests). If staff time should be accounted for travel, these hours could be placed to the personnel costs in admin persons, and mark a note in the last column on what share of salaries was coming from admin / scientific staff. See also FAQ Question A38.

**Question A35**. Our LTSER platform is organised via multiple research organisations. How do we cost office and laboratory facilities shared on multiple other projects?

Answer. The Survey is only asking about the costs, it does not ask who pays them. If you have several organisations participating (and sharing the costs), it will be important that you check from all of them what expenditure from their side is involved for rents, personnel etc. If the facilities and personnel are shared among several RIs, or if they are used also for other projects, you should only list the costs that are due to eLTER activities.

Question A36. How should the Costs in the Excel Survey be divided up over the years or especially between the implementation, Operation and decommissioning phases? This is still somewhat unclear. Answer. Implementation phase means the years when your site is upgrading towards fulfilling the Standard Observations. For some sites this may be a few years, for others up to five years might be needed. After that the Operational phase starts. This is anticipated to last forever (;)) but at some point the operations might need to cease; that is the decommissioning costs. Although the timing is unknown, we are asking you to estimate what kind of sums might be involved.

Question A37. So, if I have the building and don't have to rent rooms and lab, the sum is 0 in the implementation phase?

Answer. Right, in that case no expenditure is required for building or renting the premises. However, in any case you will need to maintain the premises, so you put this into the row 107 (in operation costs)

Question A38. If a scientific person needs time for preparation, getting there. So we add that in this template?

Answer. See FAQ Question A34. Although the travel costs only include the actual costs for driving to the site, the time of scientific staff can be added in the Admin/managerial staff rows; in that case remember to make a note in the Column M.

**Question A39**. So if you started with the observations years ago, there are no startup costs? Answer. This will become apparent in the Deselected SOs in the SO Costs App. However, the needed 'fixed installations' should be listed in year 2024 (--> the Capital Value of the Site/Platform)

Question A40. Travel costs can include boat costs for sampling operations, or they have to be included in miscellaneous?

Answer. Any travel costs required for operations can be placed in the Travel costs. Just make a note of what was included.

**Question A41**. Two questions: 1) During the last webinar you mentioned that only cat 1 and 2 sites / platforms need to respond. Is this still valid, or will Cat 3 sites / platforms be expected to respond too?

2) Most sites will not be decommissioned any time soon, I assume leaving the last part of this survey blank is OK in this case?

Answer. See FAQ Question A22; Please try to fill in also the decommissioning costs as much as you can, this way we can get comparable cost estimates.

**Question A42.** Why "personnel (scientific/technical)" is only in the decommission phase and not in the implementation and operation phases?

Answer. The scientific and technical personnel are included in the Standard Observations cost estimates. See FAQ Question A26.

**Question A43**. If we built e.g. a measuring tower in 2019, and we have no need for a second one to fulfill a certain SO, the value to fill in for 2024 would be 0 Euro?

Answer. The Year 2024 is the basic starting year, so the tower expenditure should be included there even if it was paid five years ago. This gives us the 'Capital Value'. Anything that will be purchased after 2024 will go to the respective years.

**Question A44**. The installation of a buoy for continuous measurement has to be considered in Implementation costs or in operation costs?

Answer. All installation costs should go in implementation costs in the excel template. The operation costs include the running costs for the buoy and they will be covered by the SO cost App.

**Question A45**. If we have a platform with 4 sites inside, do we have to fill in the survey and upload corresponding sheets 5 times?

Answer. That is correct. We ask for all Sites and Platforms to fill in one excel template per unit. In the Basic Information, the Sites should be indicating which Platform they belong to, and the Platforms need to list all the Sites that are inside the Platform.

**Question A46.** Should we fill the Cost Survey thinking on what site category we are or thinking on the category we aim to be?

Answer. The thinking should be as follows: Year 2024 is the status NOW, and the following years should reflect the ambition of the future. So if you plan to become a Category 1 Site or Platform, you need to include those costs to the following years and think also about the schedule for the upgrades.

Question A47. Some of the sites we operate are complex sites, which cover gradients across elevation and habitat type typical for the small-scale structure of mountain regions. For example, the site Stubai includes grasslands and forest plots in a virtual catchment spreading from valley bottom (1000 m asl) to the subalpine (2000 m). Due to obvious synergies, the costs for operating a complex site are lower than the total sum of three separate sites. However, suggesting that a complex sites composed of two grasslands at different elevations and a subalpine forest can be operated at the cost for a single site would lead to a substantial underestimation of the actual costs.

Answer. This is very true. The Cost app has its limitations at sites that span several habitats. If you want to use it for funding proposals, the Cost App can be done many times, using several selections and deselections, which would then give a range of costs for the site cluster. For the Cost Survey, it is important to find a sensible combination of SOs in order to capture the covered region as well as possible in terms of WAILS. Particularly important in this context is the design report that is to be created for the labeling process and in which the concept of specific observations is described. Another option is to consider what is a "typical" habitat in the observatory for which the eLTER concept can be implemented (e.g. Donana is mainly wetland but has also activities in agricultural land or forests, but wetland can be seen as the focus habitat); the other habitats could then perhaps be integrated with significantly less mandatory effort. We'll keep on developing the Site concept to take into account this kind of situations, thanks for the feedback.

#### Question A48.

In case of eLTSER Platforms: Do the costs for rooms, travel, consumables, utilities etc. for those people whose personnel is included in the SO calculation (scientists, technicians) have to be calculated in the excel sheet?

Answer. Yes, exactly. The reason the scientific personnel is included in Platforms but not in Sites is that the SOs related to operations in Platforms do require some workforce. The corresponding work hours are already included in the SO costings for Sites.

#### Question A49.

The cost survey guide says estimates of inflation should not be included for the future years. Therefore, I suppose the same holds true for value adjustments of personnel wages. Is that correct? Answer. That is correct

Question A50. My question refers to the case that we are calculating the costs of the Platform itself without any costs of the associated Sites. The work hours for the SOs in Platforms are included in the SO costings for Platforms (calculated by eLTER); the "scientific personnel" in the cost template (survey) is for additional work hours, right?

Answer. That's correct. For Sites, the scientific staff needed for operations is included in the SO Costs app. Rows 114-116 in Platforms excel are meant for the staff that is needed to complement the centrally acquired socio-ecological SOs (in Sites).

#### Question A51.

Answer.

#### Question A52.

Answer.

#### Question A53.

Answer.

#### Question A54.

Answer.

# FAQs for eLTER SO Cost application

# Question B1. What is the purpose of this application?

Answer. This application enables users to estimate the operational costs associated with running an eLTER Site or eLTSER Platform. It is designed for eLTER SPC (Site and Platform Coordinators) and National Coordinators to make informed budgetary decisions.

#### Question B2. Who should use this application?

Answer. The target audience includes eLTER SPC and National Coordinators within the eLTER Research Infrastructure (RI).

# Question B3. How do I use the application?

Answer. Navigate to the setup tab and select your Site's eLTER category, habitat, and, for category 1 sites, two focus spheres. You can deselect specific Standard Observations (SO) if they are covered.

# Question B4. Is my data stored or shared?

Answer. No user data is stored. If you wish to keep a copy of your results, there is an option to download them. You need to download the data to include it in the Cost Questionnaire.

# Question B5. What are the technical requirements for using the application?

Answer. The application is accessible via any web browser, with no additional requirements.

### Question B6. What knowledge is required to use the app effectively?

Answer. Users should have a basic understanding of eLTER RI's content and logic to use the application efficiently. In particular, the user is advised to familiarise with <u>Discussion Paper on eLTER Standard Observation</u> and Site categories.

### Question B7. Is there a guide on how to use the application?

Answer. Yes, the info tab provides a brief introduction and usage guide. In addition, the recording of "eLTER SPF webinar: Costs for Sites and Platforms (4 April at 10 CEST)" is <u>HERE.</u>

#### Question B8. Are the cost estimates accurate?

Answer. The application provides rough estimates, not precise costs, and does not include labour costs. It calculates the number of working days needed but does not estimate personnel expenses. The costs are based on expert groups' in-depth work during 2023-24. Any questions on the cost estimates can be sent to Jaana Bäck and Steffen Zacharias.

## Question B9. How often is the application updated?

Answer. The application is updated regularly. For updates and version history, check the GitHub page linked in the application. The current running web application is the most recent <u>release on GitHub</u>.

## Question B10. How can I report bugs or provide feedback?

Answer. Please add your feedback or bug reports directly to <u>GitHub</u>, or to the application developer's email, available on the info page.

Question B11. How to deal with an SO that is partly covered by the already established site? For example with SOHYD-006, everything is measured except oxygen and conductivity. Do we still select SOHYD-006 or do we deselect it in the SO Cost app? (especially in regards to the Cost Survey where the SO Cost excel output is required)

Answer. To ensure that the SO costs are not underestimated, it is advisable to include also those SOs that are partly covered.

Question B12. The SO cost webpage indicates that "Optionally, deselect the SOs that are not needed for your site (i.e. SOs covered by other means)". Should I deselect SO that are already being measured in my site?

Answer. That's correct. The deselection means that these instruments are already in place, and you do

not need to invest in setting up or upgrading the deselected SOs. The needed investments for upgrading the Site will be the result of the SO cost app.

**Question B13**. In some cases the Personnel costs seem to be quite low. Based on our experience there should be significantly higher costs for some measurements. What to do with them?

Answer. This is a very good question and will be taken for further development of the SO costs app. The current work day estimates are based on expert assessment, and may be too low (or too high) because the location, habitat or some other factors can affect the time required. However, the results will anyhow be given as estimates, with very large uncertainties due to many reasons. If you need to use the app for your own purposes (like national funding proposals), it should be straightforward to modify the outcome (excel) and add FTEs to the SOs you think are underestimated.

**Question B14**. For the eddy covariance (SOATM\_176): it is important to know what is expected in terms of data handling, but I guess a data quality check at least is needed by the stations?

Answer. The EC (or any other) data processing is not included, but a first round of raw data quality checks is included.

**Question B15**. If some SOs of a habitat specific set are already measured at a site and these measurements are not based on project money, but on own budgetary funds, can these be put on the cost list ("happy that it can be claimed now!") or do they need to be unchecked as this has been funded in the past as a regular task?

Answer. If something is already measured, then the implementation cost is already being taken care of and it should be deselected in the app. BUT: this will be added to the operational costs by us centrally and it will be accounted for in the annual budget of operating a site.

Question B16. To what extent data of national (in Germany DWD) WMO weather stations can be used as a proxy for SOs related to weather so that no own weather station needs to be run. I guess many countries will have a network of official "national" weather stations which will sometimes be quite close to an eLTER site. Are there any criteria when these data can be taken as a proxy for the corresponding SO at a site (distance, topography, ...)?

Answer. This is a question that relates to site design and cannot be generalised, unfortunately. In the labelling process the Sites will need to specify how they plan to implement the SO scheme, and if they have a weather station close by the Site may try to get that approved. It will likely depend on the distance, topography and other local conditions.

The protocol writing team might come up with a criterion, so let's wait. Until then: the weather station should be kept in the app as one of the needed installations.

Question B17. Regarding SOGEO\_001, a one-time cost of 2000 € is indicated in the excel file, but when filling in the sheet in the app this cost is not included. Is this as this will be a central service? Answer. The intention of the cost app is to determine the additional costs of setting up and operating an eLTER site/platform. It is currently being discussed whether and how this SO (SOGEO\_001) can be provided via a central service. In this case, there are no additional costs for the site.

**Question B18.** Some Sites comprise more than one habitat. Are multiple answers possible or do we have to choose a "main" habitat?

Answer. You need to select only one habitat. For large areas and extended Sites that include several types of habitats, the main, "typical", "characterising" habitat should be selected and drive the design regarding the Standard Observations.

Question B19 Is there any way to take into account existing old equipment?

Answer. The survey is asking for what is needed for your site to run the needed SOs. If you already have instrumentation that is fulfilling the requirements, then, you should deselect those SOs from the SO costs application. See also FAQ Question B12.

Question B21. The estimate does not take into account the area of a site. Is there a method to estimate the costs based on the number/density of measurement locations needed?

Answer. The costs are based on expert evaluations about the needed numbers of replicates and are in this way representing an average site. However, we do not advise to change the costs based on possible site specific features at this stage. See also FAQ Questions B13 and B22

**Question B22**. If you have better estimate for your own site, should we stick to the numbers from the SO Cost app or add a new one?

Answer. In the SO Cost app the numbers should be kept, it is not advisable to change the costs according to your specific site (although we recognise this might be true in reality). In the next phase, changes to the costs can be made and the App will be updated accordingly. All comments regarding the real costs are very welcome. Check also FAQ Question B13 and B21.

Question B23. Sites with multiple habitats. Should the App be filled for each of them, one by one? Answer. Here we ask only the main habitat which you will also list in the labelling of your site. Focus should be on the habitat which is the most relevant for your site. However, if you can choose, it might be also strategically wise to select habitats based on the eLTER needs (strategic negotiations with eLTER Coordination and the National Coordinators are advised).

**Question B24**. If a site is labelled for only one type of Ecosystem, will the label also mention secondary ecosystems as well?

Answer. This survey does not ask for secondary ecosystems, so you should select the main habitat here. See also FAQ Question B23

Question B25. Is the online SO tool updated with the latest SO changes, including SOSOC by platform?

Answer. The SO App will be updated once the Survey is ended. The Platform costs will not be included in the SO Cost app for now, until there is more clarity of what they include.

**Question B26**. Is it feasible to deselect any SOs that include regular taking of samples? Even If you already perform the respective SO, this does not save any expenses for future execution of the SO, since you always have to take new samples (other than with SOs measured by a sensor you only have to buy once).

Answer. The intention of the cost app is to determine the additional costs of setting up and operating an eLTER site/platform. Accordingly, all SOs that are already part of the regular monitoring program, (means independent from eLTER), should/can be deselected. To give you an example - For a site that is already labelled as an ICOS site, this would be e.g. SOBIO\_095 Leaf-Elements or SOBIO\_092 Forests-Litterfall. Both of these measurements are part of the mandatory ICOS program. These measurements, which are also mandatory for eLTER forest sites, are therefore already provided as part of the ICOS obligations and therefore do not create any additional costs when the specific (ICOS) site is further developed into an eLTER site.

## Question B27.

Answer.

# Question B28.

Answer.

# Question B29.

Answer.

# Question B30.

Answer.