ERASMUS+ project

"EUMA - improvement of good governance of climbing and mountaineering in Europe"

No. 612970-EPP-1-2019-1-CZ-SPO-SCP

✓ **Trail Maintenance**

Co-funded by the Erasmus+ Programme of the European Union

euma
european-moutaineers.eu

Trail Maintenance

Focus on some key aspects of the process

Index

1 Introduction

Organizations affiliated with ERA and EUMA often maintain a network of trails. This maintenance can generally be divided into ordinary (periodic) and extraordinary maintenance, i.e., for the improvement of infrastructure on the trails or to deal with damage caused by atmospheric or catastrophic events.

The aim of this document is to give general indications on legislative principles that associations should promote in their country as well as recommendations on how a trail maintenance activity could be organized. It gives indication of procedures that determine measurable activities which can predict budgets for future maintenance.

For example, once the typical cost items have been identified, a cost factor per km of trail network can be calculated and used to estimate the budget required for its maintenance.

Material requirements are to be considered separately, which, especially in the case of Via Ferratas, can have a major impact on economic requirements. It is suggested to carry out extraordinary maintenance in specific projects as will be described later in this document.

2 Terms definition and abbreviations

2.1 Trails

Walking, hiking, and mountain trails are footpaths of public interest, for the purpose of walking, running or climbing, located in all types of landscapes, visible and clearly recognizable in the terrain, and are physically marked and signposted.

In Europe, walking, hiking and mountain trails are part of the network of trails under the umbrella of one of the two European NGOs: the European Union of Mountaineering Associations (EUMA) and the European Ramblers' Association (ERA).

2.2 Ordinary maintenance

Ordinary maintenance of a trail includes all those activities aimed at clearing the pathway from leaves, dry branches, stones, brambles, and small trees that have fallen or grown back on the pathway and so on. All activities, therefore, that can also be carried out with the help of simple gardening tools such as a rake, branch shears, hacksaw and pruning shears for example. Tools, moreover, that need neither a license nor special experience to be handled; ordinary maintenance activities include the renewal of trail markers.

2.3 Extraordinary maintenance

Extraordinary maintenance of a trail, on the other hand, refers to all those activities aimed at restoring the site of a trail, or its viability, even with the aid of specific tools/machinery which may require a license to be handled, such asshovels, chainsaws, brush cutters, vibrating plates, earth moving machines or agricultural machinery. Extraordinary maintenance includes the replacement of signposts on the trail.

3 General legislative principles.

Regardless of the differences in various national practices, there are some general principles that should be present in any legal framework regulating the design, use, maintenance, and management of trails:

- The right of free access to natural habitats should be established and guaranteed, especially:
    - woods and forests

    - alpine pastures
    - rock faces and high mountain trails
    - wasteland
    - floodplains
    - riparian zones
    - cultivated areas
- Subject to the necessary safety conditions, the free use of the same resources must be guaranteed for horse-riding and driving in non-motorized vehicles. In the case of mixed use, pedestrians should have priority.
- A specific regulation should be formulated concerning the design, use, maintenance, and management of trails (including supporting facilities, such as rest areas, camping areas, bivouacs, shelters, information points and generally everything related to the tourist or recreational use of trails), whether it is organizations' strategy as an internal regulation or preferably local/state law
- A suitable commission for the approval of new trails, trails or any organized and/or equipped nature trails (via ferratas, adventure trails, etc.) must be clearly identified.
- Once new trails are included in public infrastructure, the obligation for owners to tolerate signposting and the passage of hikers along their properties must be defined.
- Criteria for the design of the hiking network should be clearly defined (including marking rules, rules for collecting technical and historical cultural information, rules for assigning a scale of technical difficulty to trails etc).
- Public and 'official' repositories for storing the technical data of the trail network must be set up, those responsible for entering and updating the data must be identified, and procedures to ensure that data is up to date must be established.
- Training should be provided for trail maintainers and way an person wo are involved in trail maintenance and way marking so that they can meet precise requirements for suitability.
- The requirements for organizations involved in the design, management and maintenance of trails must be clearly identified. These criteria form the basis for assessing and awarding maintenance and/or infrastructure management contracts. Organizations with an environment vocation and a vocation for the conservation of the territory and the historical and cultural heritage should be preferred.
- The rules for allocating maintenance funds must be defined according to precise spending rationales, (for example: hourly reimbursements, reimbursement of travel expenses, fixed quotas per km of newly marked or maintained trail, logistical and administrative support, etc.).
- A budged for trail maintenance should be funded from public funds.
- Out-of-pocket expenses for the purchase of material such as signposts, directional arrows for crossings and material for the construction of via ferrata routes should be financed separately. All funding should be provided based on a detailed cost plan from the organizations responsible for trail management and maintenance. Principles of transparency in the allocation of funds should be clearly defined in regulations and maintenance contracts. It is advised that funds for special expenses should be awarded if a detailed plan is presented.
- The organizational structure of personnel engaged in trail maintenance should be clearly defined.

4 Tasks carried out by the maintenance organization.

There are several tasks that should be carried out by the maintenance organization. These tasks form the basis of the organizational process from which the planning of ordinary and extraordinary maintenance activities derives. It is strongly recommended that all extraordinary maintenance activities be carried out in specific projects, in which

the objectives and activities necessary to achieve them are established, financially estimated, and planned over time, with a precise allocation of resources.

An example of typical activities related to routine maintenance is given below:

- Maintain trail signs,
  - replace missing or damaged trail signs
  - clean if necessary
  - clear the view to trail signs (cut the vegetation)
  - additional check if hikers give notice to unclear routing
- Check of trail conditions periodically (once a year) and after damaging weather or geological events report damages of signposts.
- Clear overgrown trails.
- Temporarily close the trail if trail surface is impassable.
- Report damage of trails infrastructure (picknick rests and tables, shelters...).
- Communicate with communities, governments, nature park associations, local action groups (LEADER).

Extraordinary maintenance can consist of various improvements, for example to improve trails safety, traceability (replacement of signposts, additional signs, the construction, or repair of infrastructure such as bridges, bivouacs, steel cables, iron rods and other equipment to facilitate upward movement) and planning and marking of new trails.

5 The organizational process:

Generally, the association/organization (body) that maintains the trails copes with typical organizational processes that lead to the identification of certain roles and consequently the typical expenses of the activity, to be distinguished between current/recurring and extraordinary expenses.

Key activities affiliated with trail maintenance:

1. The organization proposes itself as the maintainer of the network of trails to receive an explicit mandate which may be exclusive or shared with other associations.
2. The organisation analyses and identifies its scope of operations, liaising with any other parties with whom it shares maintenance activities. At this stage, it sets up a land register, preferably a computerized one:
   a. of each individual trail forming the network, categorizing them according to some rational criteria that will be useful in drawing up the maintenance plan. The attributes that should be included in the survey:
      i. the identification number/name of the trail
      ii. locality/territorial area
      iii. trail keeper
      iv. length
      v. technical difficulty
      vi. type of waymarking (paints, signposts etc.)
      vii. quality level [1]
      viii. georeferenced information (route of the trail, type and location of individual signs and signposts)
      ix. the type of trail surface,
      x. any infrastructure such as wooden bridges, fences, handrails, etc.

[1] It is useful to define criteria for the quality of the trail according to the completeness of the signposting, the presence of services, and historical or cultural emergencies. For more information, please refer to the other project documents.

b. Personnel database (with information on individuals in the organizational structure and their roles):
    i. Reference person who can intervene in the various marking and maintenance activities, possibly geographically close to the places of intervention. These should be the territorial contacts for inspection and intervention activities. The Maintenance Manager, who will act centrally as project leader for the individual activities, (drawing up the ordinary and extraordinary maintenance plan, assigning the budget, collecting information from the various process players to compile the reports to be sent to the client.
    ii. Area Coordinator - If the area of intervention is exceptionally large, area coordinators report to the project leader on the progress of the activities, described in the ordinary and extraordinary maintenance plan for the trails.
    iii. Materials warehouse manager.
    iv. Administrative and accounting support staff.
    v. Information Technology specialists.
c. Of the material and instrumental goods available to local maintenance contacts
d. The technical and functional documentation of the trails, including periodic reports based on the annual activity reporting document to the client.

6 The Tools and documents used in the organizational process

Usually, an organizational process requires the use of tools and documentation to support it, here are some suggestions:

- **Cadastre of Trails**
  It is the principal database, containing, all the paths that form the network. For each one, useful technical data and, in particular, the gpx track and georeferencing of the signposts and markers are available.
- **Master Database**
  It contains the master and contact data of all personnel involved in the maintenance activity as well as the stakeholders of the activity.
- **Accounting Programme**
  This is the programme in which all costs related to the administration and maintenance activities of the organization are managed and documented.
- **Warehouse management programme**
  This is the programme in which the loading and unloading of materials necessary for the organization's activities, in particular trail maintenance activities, is managed.
- **Work Protocols**
  Individual maintenance activities are governed by certain protocols that provide a mode of engagement (usually through work orders) and a mode of activity reporting (usually through work reports)
- **Work Order**
  Individual/team order containing the maintenance task to be done, typically issued by the Central or the Area Maintenance Manager
- **Work Report**
  For each maintenance activity, the individual or the team of territorial contact persons, report on the activity carried out, including the condition of the trail, the travel or accommodation costs incurred, and the hours of work required to complete the activity.
- Annual report for the client
  This report summarizes all the activities carried out during the year, specifying the costs incurred and any extraordinary maintenance to be carried out on a project basis.

7 The roles involved in the organizational process

The number of organizational roles assigned within the process depends essentially on the size of the trails network, that is on the extent of the maintenance necessary.

For example, if the network of trails is very extensive, it will be necessary to divide it into areas. For each area there will be an Area Maintenance Manager with the task of coordinating and reporting on activities to the Central Manager. Whereas, if the network is relatively small, it may be sufficient to have a Central Maintenance Manager with the task of coordinating and reporting activities.

The main organizational roles that might be required by the process are described below.

7.1 Central Maintenance Manager

He/she is the reference figure for the entire waymarking and maintenance process and is responsible for drawing up the ordinary plan and any extraordinary maintenance plans, to be shared, prior to start-up, with the geographical area contacts, if any, or with the territorial contacts.

He/she collects the technical information needed to obtain funding for the activities from the commissioning body. He/she produces evidence of expenditure and integrates the reports produced by individual teams into a single document to be delivered periodically to the commissioning organization.

As project manager, he/she coordinates and monitors the execution of the work plans together with the geographical area contacts, to be able to intervene in case of problems and delays.

Meetings are suggested at the start of the activities and intermediate work progress, to be planned as needed.

7.2 Area Maintenance Manager.

In cases where the maintenance perimeter is geographically wide, it is useful to have Area Maintenance Managers who functionally report to the Central Maintenance Manager with whom they have the same tasks and responsibilities on a local level.

7.3 Territorial contacts

These are the people at the grass-roots level who are responsible for marking and maintaining the trails, receiving the necessary material, and planning the activities which they will carry out expertly, organizing themselves into maintenance teams.

They will inspect the condition of the trails at least once a year, if possible, in early spring, and take action to make them passable and restore any missing signs.

They keep a record of their travel expenses and working hours, in a maintenance logbook, and at the end of each maintenance session they draw up a report showing the expenses incurred, the hours worked, the needs encountered, the work carried out, any needs to relocate the trail in the event of landslides or other.

Special events such as the relocation of a trail, or a major rehabilitation of the road system, should be dealt with by drawing up an extraordinary intervention plan. This includes, for example, the total renewal of signposting that some organizations carry out every three years for trails marked with paint and not with metal markers.

7.4 Person Responsible for the material goods warehouse

He/she oversees storing material provided by the commissioning body, tools and other material goods that are needed by the maintenance teams.

He/she keeps accounts of stock entries and exits, drawing up a report on material requirements once a year, based on historical usage data. He/she is necessarily involved in the drafting of any extraordinary maintenance plans that could lead to greater consumption of material than planned.

7.5 Administrative and accounting support figures

They are responsible for the proper maintenance of accounting records, which are useful for producing the year-end profit and loss statement.
They support all others in carrying out activities within their own competencies.

7.6 Information Technology specialists

The cadastre of trails, the administrative and accounting activities, have an important impact in terms of the Information Technology needed, it is therefore necessary to have one or more support figures who can take care of the IT equipment available to the association in terms of software licenses and hardware devices.
They functionally report to the Central Maintenance Manager.

8 Activities resulting from the maintenance process

Some of the possible activities resulting from the analysis of the organizational project are described below. For each one, the type of remuneration is indicated. It is essential, for each activity, to measure the number of hours that were needed to carry it out, which is documented in the document "Report of hours worked".

In the case of out-of-pocket expenses, travel, accommodation, purchase of material, it is essential that these are documented.

Once the value of an hourly wage has been assigned, it is possible to obtain the total spent by adding up the amounts of all the hours worked and the necessary out-of-pocket expenses.

The ratio of total expenditure to total km of the footpath network provides an expenditure rationale that can be used for the maintenance budget request, for example:
If the trail network is 100km long and the final cost per km will be 30€, the budget to be requested will be: 1000km * 30.00€ = 30,000€, to which must be added the budget for the purchase of material to be obtained separately.

This metric makes it easy to put a value on the maintenance of newly established trails: take the average cost per km and multiply it by the kilometres of new trail.

For each activity, the potential roles involved, the input data used by the activity, the output obtained at the end of the activity, a proposal of documents to be drafted in each activity are indicated.

#	Activities	Roles involved	Input	Output	Documents / Product data	Type Cost
1	Definition of the maintenance perimeter	Maintenance Managers, client	Maintenance agreement, any maps and other descriptive data GPX tracks, Georeferencing of markings and signs	Organized data that can be uploaded to a trail register	Technical data sheets for individual trails Ratio of hours worked by figures involved	Hourly wage
2	Establishment and uploading of the trail register	Maintenance Managers, IT specialists, Regional contacts	Technical data sheets for individual trails Personal data of persons with roles	Data uploaded to the trail cadastre, including details of people involved in the activities	Trail network Data trails for classification criteria e.g.: geographical area, difficulty type Ratio of hours worked by figures involved	Hourly wage
3	Division of the maintenance perimeter	Maintenance Managers	Master data and skills of maintenance personnel	Maintenance project charter	Register of resources with assigned competences, roles and tasks Hours worked report	Hourly wage
4	Drafting and sharing of the routine maintenance plan and appointment of roles	Maintenance Managers Regional contacts	Data from footpath cadastre	Activity plan with estimated effort and costs per hourly wage and estimated expense reimbursement	Gantt chart Work Breakdown structure Cost Breakdown Structure Hours worked report	Hourly wage
5	Drafting of any extraordinary intervention plans	Maintenance Managers Regional contacts	Data from footpath cadastre	Activity plan with estimated effort and costs per hourly wage and estimated expense reimbursement	Gantt chart Work Breakdown structure Cost Breakdown Structure Hours worked report	Hourly wage
6	Setting up and managing the materialand tools warehouse	Material goods warehouse manager. Administrative and accounting support staff	Material and equipment purchase documents	Stock journal. Opening stocks at year-end	Updated warehouse, Register of inventory entries and exits Report Hours worked	Hourly wage

7	Allocation of material assets to maintenance teams	Maintenance Managers, Regioinal contacts, Material goods warehouse manager.	Activity plan with estimated effort and costs per hourly wage and estimated expense reimbursement	Delivery of material to teams	Delivery notes for material Warehouse stocks Hours worked report	Hourly wage
8	Annual inspection and maintenance of trails	Maintenance Managers, Regional contacts,	Activity plan with estimated effort and costs per hourly wage and estimated expense reimbursement	Trail safe and passable by users	Maintenance reports and future needs. Final Hours worked Travel Expense Reimbursement Sheet	Hourly wage and Reimbursement of expenses. Reimbursement of mileage
9	Any extraordinary maintenance work	Maintenance Managers, Regional contacts,	Activity plan with estimated effort and costs per hourly wage and estimated expense reimbursement	Path safe and passable by users	Maintenance reports and future needs. Final Hours worked Travel Expense Reimbursement Sheet	Hourly wage and reimbursement of expenses. Reimbursement of kilometres travelled
10	Controlling and monitoring project activities	Maintenance Managers, Regional contacts,	Report on maintenance work and future needs, Report on working hours and travel expenses	Up-to-date status of works, possible corrective actions	Periodic progress reports. Hours worked report	Hourly wage
11	Periodic accounting closures	Maintenance Manager, Administrative and accounting support staff IT-Specialist	Periodic progress reports.	Reimbursement accounting movements and updating of balance sheet data	Periodic accounting progress reports Hours worked report	Hourly wage
12	Sending activity reports to the client	Maintenance Manager, administrative and accounting support figures	Periodic progress report Periodic accounting progress reports	Single document per client containing the activities carried out and the accounting cash flow	Periodic document for the client Hours worked report	Hourly wage
13	Next year's maintenance budget request The final cost per km	Maintenance Manager, administrative and accounting support figures	Periodic documents for the client	Schedule of preventive expenditure Estimate of hours worked	Document for budget request, contains needs calculated by net maintenance cost per km multiplied by the	Hourly wage

	incurred by the association is calculated	IT-specialist		Estimate of material assets needed Net maintenance cost per km.	network of trails and apart from the budget necessary for the purchase of material goods. Hours worked report	

8.1 Focus on types of costs and their use for budgeting

It is strongly recommended to keep an account of the costs incurred during the maintenance activity. Having an effective administrative management is not only useful to manage maintenance activities well, but it could also be used to build rationales or indicators to be used in estimating new maintenance or simply to plan it correctly in terms of time and budget needed.

The subject of rationales/indicators is very broad; below, by way of example, just a few possible indicators are described, certainly not exhaustive.

8.2 For maintenance activities

The activities outlined in the previous paragraph give rise to three different types of costs, which together can pay for the work carried out by the various process roles; the people who perform the roles may be professionals or volunteers, and depending on this status, adjustments will have to be made to what is outlined below, immediately applicable to volunteer staff.

In the cost analysis below, we consider the maintenance of a trail which is 35 km long (Trail Length), 50 km away from the maintenance team's headquarters (Trail Distance) requiring 15 hours of total work (Effort), with the need to eat a packed lunch and stay overnight in a hotel (Accommodation Cost).

1. All work done can be measured in hours, the sum of the hours taken to complete a task is the Effort. To obtain an economic value it is necessary to establish an hourly wage, which multiplied by the Effort determines a first cost of the same, for example if the hours worked are one hundred and the cost per hour is twenty-five euros we will have: **15h*25.00€ = 375.00€** (**Effort Cost**)
2. In fact, to carry out maintenance activities it is often necessary to travel to the entrance of the trail by means of transport, normally a reimbursement per km is established, for example 0.35€/km, so if the total distance travelled is 50 km, round trip, we will have **100*0.35€ = 35.00€ (Travel Cost).**
3. As the maintenance activity is lengthy, the staff incurs expenses for food and accommodation; these will have to be considered in addition to the previous costs. Let us assume, for example, that we have 8.00€ for a packed lunch and 45.00€ for half-board accommodation. The cost that will be reimbursed will then be **8.00€ + 45.00€ = 53.00€ (Accommodation Cost).**

At this point we can calculate:

- **Effort Cost + Travel Cost + Accommodation Cost = Total Activity Cost** i.e.
  375.00€+35.00€+53.00€ = 463.00€ (Total Activity Cost)
- **Total Activity Cost / Trail Distance = Partial Cost per km** i.e.
  463.00€ / 35 Km = 13.22€ which rounded up to the next whole number becomes 14.00€ (Partial Cost per km)

It is very useful to have the maintenance teams draw up a sheet listing all the activities carried out, the critical points encountered, any needs for improvement and, of course, the representation of the values of

- Effort Cost
- Travel Cost
- Accommodation Cost
- Total Activity Cost
- Partial Cost per km

8.3 For administrative/accounting support activities

Generally, for all human activities it is always possible to calculate the Total Activity Cost in terms of the sum of Effort Cost, Travel Cost and Accommodation Cost.

It is essential to keep track of the costs of the activities because the final objective is to calculate the value of a parameter that we will call **Total Cost per km** that will be used to request the budget necessary for maintenance and to estimate the economic impact of the extension of the maintenance perimeter, for example with the addition of more km of trails.

The calculation is very simple, on the one hand we have the sum of all the Total Activity Costs of the activities carried out during the year, without distinguishing between specific maintenance activities and support activities. On the other hand, we have the value of the total length in km of the trails maintained.

Their ratio will determine the Total Cost per km:
SUM (Total Activity Cost) / SUM (Trail Length) = Total Cost per km.

Assuming that the Total Cost per km is 30.00€ per km, if we were asked to estimate the maintenance cost for a trails network having a length of 1000 km we would have **1000 km*30.00€ = 30,000.00€.**

8.4 Other Budget Items

It is suggested that the issue of tools, consumables and signs be dealt with separately. In this case, metrics using average values lose their effectiveness, as they may be inadequate on the downside for cases requiring heavy intervention and inadequate on the upside for cases where there is no major consumption of material.

In this case the geo-referencing of all the signs on the trail, including the signs, is helpful as this is a necessary parameter for calculating the materials required, for example: I am asked to replace all the signs at the crossings of a trail, as I have their geo-referenced position, I can know the number in advance. If I ask for a cost estimate per sign, my requirements will be given by the cost per sign multiplied by the number of signs.

Geo-referencing of markings and signs is useful in countless cases, for example to estimate the time needed to repaint all the markings: If the average time to repaint a sign is more or less 6 minutes and there are one hundred signs along the trail, I will calculate that the total Effort will be 600 minutes, i.e., 10 hours.

Obviously, we will also be able to anticipate the cost of the Effort since knowing the value of an hourly wage we will obtain the Effort Cost given by 10h * 25.00€ = 250.00€.

This is particularly important when it comes to the replacement of a steel cable along a via ferrata, where the calculation of the maintenance effort and the precise cost of the material requirements are of vital importance.

9 Focus on documents/data produced

In the proposed organizational process example, there are tools, supporting documents that use data that are collected and stored for future use.

The following is a small overview of what could result from the adoption of a process for the routine maintenance of trails. Technical data sheets for individual trails.

Starting from the technical data repository, detail sheets are produced containing the technical data of each trail, or section of trail, subject to maintenance. A data sheet will contain important data such as length, technical difficulty, number of markers used, number and types of signs, including positioning coordinates. On this sheet, the name of the maintenance team to which the trail or section of trail has been assigned is normally specified.

It is useful to have one or more note fields where particular needs or criticalities of the trail can be reported.

9.1 Ratio of hours worked by figures involved

For each process activity carried out, the person/role who carried it out reports the number of hours spent on it. This is a fundamental value for measuring the effort used for activities that are strictly relevant or that assist maintenance. The **Total Cost per km** is calculated based on the total hours spent.

9.2 Trail network

It represents the fundamental data for maintenance activities, it must be complete with all the fundamental technical data, so that it can be used to produce data sheets that are assigned to specific work teams.

This amount of information is preferably stored in electronic format, so that it can be easily navigated with data analysis tools.

9.3 Register of resources with assigned competences, roles, and tasks

It contains the biographical information, skills, and abilities of each individual maintenance person.

9.4 Gantt chart

It is a diagram showing activities along a time axis, including dependency relationships between individual activities, and is generally used in project management because of the intuitive way in which it can be interpreted.

9.5 Work Breakdown structure (WBS)

It is the decomposition of the project into atomic activities, the responsibility for the execution of which may be assigned to a team or a single resource.

9.6 Cost Breakdown Structure (CBS)

It shows the allocated budget and the actual costs for each of the atomic activities identified in the WBS; together with the WBS, it is a frequently used diagram in project management.

9.7 Delivery notes for material

The maintenance teams receive the material and tools needed to carry out maintenance from the warehouseman. Each of these assignments is documented in a material delivery note. It is the responsibility of the maintenance teams to record the use of the material and to communicate the stock at the end of the year to the warehouseman.

9.8 Warehouse stocks

The stock of material and tools is established by knowing the number of units present at the beginning of the activities (initial stock at the beginning of the year), withdrawal of material or tools is noted, reducing the initial stock). Supplies of new material or instruments, in the same way, are noted, increasing the stock. The records of all entries and exits constitute the Stock Entry and Exit Journal.

9.9 Maintenance reports and future needs

At the end of each activity, the maintenance team draws up a report summarizing the restoration or maintenance work carried out, indicating any critical points or points of attention that may require additional action.

9.10 Travel Expense Reimbursement Sheet

This is a report of the expenses incurred by the team members to travel to the maintenance point or to stay overnight if the activity cannot be completed during the day.

It may be integrated in the maintenance report or constitute a separate document, chosen by the maintenance organization depending on the complexity of the network to be maintained.

9.11 Periodic progress reports

This is a summary report on the progress of maintenance work, drawn up at a frequency agreed between the Maintenance Manager and the client. For its preparation, meetings are scheduled in person or online between the managers and the maintenance teams.

9.12 Periodic accounting progress reports

This is the economic and financial view of the periodic progress reports, which is necessary to promptly identify any deviations from the budget allocation that require corrective action.

9.13 Periodic document for the client

It may be prepared and provided at the same frequency as the Progress Report documents, or it may be provided at a different frequency, depending on the agreement between the maintenance organization and the client.

9.14 Budget request document

Before the end of the year, based on the costs incurred and the calculated cost indicators, the budget request document for the following year is prepared for the maintenance contractor. The more accurately costs and requirements are monitored, the more precise and accurate the budget request document can be.

It should be kept in mind how material and tools will impact on the planned activities, as these cannot be effectively traced to a cost-per-kilometre concept. With regard to material, it should be noted that there is a start-up cost for maintenance activities given by the purchase of tools (e.g., brush cutters, shears, brushes) and consumables such as paints, screws, etc. Obviously, with use, these tools will wear out and the consumables will run out.

The assessment of the need for tools and material is the responsibility of the Warehouse Manager together with the Maintenance Manager.

10 Conclusions

The contents of this document will need to be calibrated against the local, regional, and national regulations in which the organizations find themselves working, so it cannot be considered exhaustive.
Its aim was to encourage the use of systemic approaches and to use metrics to ask the respective funding bodies to provide the necessary funding for the maintenance of the trail network, which in our Europe is increasingly becoming an economic driver for the territories it traverses.

Co-funded by the
Erasmus+ Programme
of the European Union

Partner associations:

- ✓ Alpine Association of Slovenia
- ✓ Austrian Alpine Club
- ✓ Charles University
- ✓ Czech Mountaineering Federation
- ✓ European Ramblers' Association
- ✓ German Alpine Club
- ✓ Hellenic Federation of Mountaineering and Climbing
- ✓ Mountaineering Federation of North Macedonia

european-moutaineers.eu

EUMA - European Union of Mountaineering Associations

EUMA Office c/o DAV
Anni-Alberst-Strasse 7
D-80807 München

E-Mail: info@european-mountaineers.eu
VAT:BE0696.898.973