

DIGIMEDFOR

Digital tools and technology systems for the sustainable management of Mediterranean forest resources

D1.1 – PROJECT MANAGEMENT & QUALITY PLAN

VERSION 1.0



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FR I







Asociación Española para la Sostenibilidad Forestal





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DIGIMEDFOR Consortium

DIGIMEDFOR Consortium consists of a well-balanced set of partners that cover all the needed competencies and the whole value chain from research to operations. It brings together 21 partners from 8 EU countries (Belgium, Croatia, Finland, France, Greece, Italy, Slovakia, Spain) plus 3 extra EU countries Tunisia, Turkey and Ukraine, covering most of the Mediterranean basin.

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Index

| Ex | ecut | tive s | summary | 6 |
|----|-------|------------|--|----|
| 1 | | D1.′ | 1 Deliverable introduction | 7 |
| | 1.1 | D1.1 | 1 Deliverable Structure | 7 |
| 2 | | The | DIGIMEDFOR Project | 9 |
| | 2.1 | The | DIGIMEDFOR Work-Packages | 10 |
| | 2.2 | DIG | IMEDFOR Organisation | 11 |
| | 2.3 | Con | sortium Members | |
| | 24 | Mar | agement Structure and Procedures | 13 |
| | 2.5 | Mar | agement Bodies | |
| 2 | 2.5 | CAR | NTT Chart | |
| 3 | | GAI | | 10 |
| 4 | | inar | nagement Plan | |
| | 4.1 | Lega | al, Financial and Administrative Management | 16 |
| | 4.2 | Dec | ision procedures | 16 |
| | 4.3 | Fina | ancial provisions | 16 |
| | 4.4 | Coll | aboration and Communication management | 17 |
| | 4.4 | 4.1 | Cooperative Working Environment | |
| | 4.4 | 4.2 | Public Website | |
| | 4.4 | 4.3 | Participant Portal | |
| | 4.4 | 4.4 | Communication Tools | |
| | 4.4 | 4.5 | Project Meetings | |
| | 4.4 | 4.6 | Organisation of the Meetings | |
| | 4.4 | 4.7 1 8 | Deliverable and File naming convention | |
| | 4.4 | 4.0 4.0 | Roles in the deliverable | 20 |
| | 4.4 | 4.10 | Deliverable Review Process | |
| | 4.4 | 4.11 | Deliverable and File naming convention | |
| | 4.4 | 4.12 | Progress Reporting | |
| | 4.4 | 4.13 | Periodic Technical and Financial Reporting | |
| 5 | | Risl | k and Issues Management Plan | 31 |
| | 5.1 | Risk | Management | |
| | 5.2 | Ider | ntified Top Risks | 32 |
| | 5.3 | Imp | lementation of Ethical Requirements | 33 |
| | 5.3 | 3.1 | Ethical dimension of the objectives, methodology and likely impact | |
| | 5.3 | 3.2 | Compliance with ethical principles and relevant legislations | |
| Re | efere | ences | S | 35 |
| | | | | |

Executive summary

This document presents the Project Management Plan (PMP) of the DIGIMEDFOR project.

The PMP complements the project information provided in the Grant Agreement Description of Action and in the Consortium Agreement and serves two purposes: on the one hand, it establishes a framework for the project coordination team to effectively carry out all quality activities and monitor the project for actual and potential risks in order to avoid negative effects; and on the other hand, it is intended to serve as a handbook for every member of the project consortium in conducting their contractual project activities and facilitating their collaborative work.

This document is divided in eight sections and constitutes a **Project Management guideline** for the consortium. It describes the consortium structure as well as the roles and responsibilities of each consortium body. A Gantt chart with the project's milestones, activities, and deliverables with estimations in terms of resource allocation, duration and main meetings is provided for a sound project management. The last sections describe the project management procedures, the possible risks that may arise during the project's lifetime as well as the ethics requirements of the DIGIMEDFOR project.

The Grant Agreement Annex 1 Description of Action will remain the contractual reference; the PMP provides additional details but never contradicts the Grant Agreement.

1 D1.1 Deliverable introduction

The main objective of this document is to make the cooperation among DIGIMEDFOR' partners easier and more efficient. This document presents complete guidelines with all information, rules and procedures so that the DIGIMEDFOR' scientific and innovative outcomes comply with the project's work plan and contractual obligations. In addition, the aim of these guidelines is to ensure that the results fulfil the technical requirements set by the DIGIMEDFOR' consortium for effective progress toward the achievement of the project goals.

In this document, an organisational structure and related procedures are defined for decisionmaking, reporting, delivery of intermediate results, control of information, as well as for quality assurance. They basically serve the purpose of ensuring that each Partner follows the same guidelines.

The DIGIMEDFOR management is based on several principles that are important in interorganisational collaboration:

- An effective Project Management relies on the collaboration and cooperation amongst the partners. The DIGIMEDFOR participants are collaborating to achieve a common objective, share experience and know-how, and develop results with complementary skills;
- 2. Work must be organised and planned in a result-driven way. Whilst the internal organisation of each partner's work depends on him/her (as long as he meets his/her commitments), the interactions between partners working at distance must be based on the flow of results. Common planning must hence be a reference for everybody and must always be up-to-date;
- 3. The collaboration between participants is based on consensus and joint decisionmaking, involving different levels of decision-makers in different domains (strategic, technical, financial, and administrative). The decisions will be achieved by "rough consensus and running code (or experiments)", using formal procedures such as voting only when essential. The rules for such decision-making need to be clear;
- 4. The effectiveness of meetings between the partners is absolutely critical to the progress of work. An inconclusive meeting can cause serious delays, risks and costs;
- 5. Effective collaboration requires central coordination and logistics support. The coordination mechanisms, communication flow inside and outside the project are supported by the DIGIMEDFOR management structure;
- 6. Resource control will be achieved by assessing "Earned Value" through the assessment of intermediate level of completion of deliverable.

This document has been prepared to describe the implementation of the above principles. The recommendations in these guidelines, if used with some discipline, will reduce project overhead, ease the work of the DIGIMEDFOR management for all Partners and increase the efficiency and quality of the work carried out in the Project. It is thus imperative that all DIGIMEDFOR Partners understand and use the rules, suggestions and standards as specified in these guidelines.

1.1 D1.1 Deliverable Structure

This document is split in eight different sections as follows:

Section 1 summarizes the Project Management Plan (PMP) of the DIGIMEDFOR project, structure and objectives of the deliverable D1.1.

Section 2 defines the scope and purpose of the document, the communication procedures, both inside the consortium and outside towards stakeholders. Specific attention is dedicated to the dissemination activities.

Section 3 provides an overview of the project organisation and main bodies, to clarify the decision-making structure and to precisely identify roles and responsibilities of each consortium body.

Section 4 provides the Gantt Chart that lists the project's milestones, activities, and deliverables with estimations in terms of resource allocation, duration and main meetings.

Section 5 explains the Management procedures. This section is very important as it establishes the steps to be followed to prepare effective and high-quality documents, with a specific attention on the official deliverables. The project meetings, the communication and collaboration tools as well as the reporting mechanisms are described and detailed.

Section 6 analyses the different risks related to the project development and identifies the necessary steps to minimise the impact of the risks on the achievement of the DIGIMEDFOR project goals. The innovation management is also briefly described.

Section 7 describes the implementation of ethical requirements.

Section 8 collects the references.

2 The DIGIMEDFOR Project

DIGIMEDFOR aims to revolutionize and modernize the technological landscape of the Mediterranean forest-wood supply chain, enhancing simultaneously its competitiveness and sustainable management by ensuring the traceability of wood resources from forest to end-users. Harnessing the current digital revolution will enable stakeholders to effectively manage Mediterranean forests and improve the supply of related ecosystem services. DigiMedFor aligns with the European Union's forest strategy and digital strategy and will leverage advanced and innovative digital solutions to enhance the monitoring and management of forest resources throughout the supply chain, from their place of origin to the primary wood industry processing. The project will optimize the sustainability of wood production, improving traceability and delivery of ecosystem services by synergistically combining geo-spatial, artificial intelligence (AI), and digital twin modeling technologies with information and communication technology (ICT).

The DigiMedFor concept is structured around four main strands, each one related to the four main objectives of the project, including all the project activities, here synthetically recalled describing and motivate the structure and organization of the project:

- the activities in the digitalisation and inventory of forest data and attributes regard the *i*) collection and digitalization of existing Mediterranean forest inventory, *ii*) remote and proximal sensing of the forest attributes by means of satellite data, aerial photogrammetry, and land robotic technologies, and *iii*) inventory of Mediterranean forest resources by developing a mobile application that automatically measure and digitalize the forest attributes.
- traceability of wood resources and products is split in four activities regarding the

 in-situ wood assortment grading by means of non-destructive evaluation (NDE)
 methods of the mechanical properties of wood, ii) developing of a blockchain-based
 traceability system to counteract illegal wood harvest and exchange and *ii*) a picture based tracking system for timber and wood resources to increase the competitiveness
 of the sector and sustainability of forest management (i.e. monitoring the flux of wood
 resources), and developing of a digital certification system for wood resources-related
 ecoservices.
- Informed decision-making activities regards *i*) the design and development of a knowledge platform that integrates most of the management processes in a forest district into a single system environment, as well as an open digital repository that collects main data, best solutions, digital innovations, and practices in the Mediterranean forest supply chain, and *ii*) developing of Virtual Forest Decision Support System, a virtual model of a real forest system that allows converting the full power of AI, cloud computing, ecosystem science modelling, and forest management data into actionable insights useful for forest scientist and decision-makers.
- **sustainability and uptake** regard the *i*) development of new business models are necessary to scale up the adoption of innovative sustainable management practices of forest resources. Key elements of this strategy aim at performing ad hoc business models and feasibility studies to enable market exploitation of developed digital innovations, *ii*) identification of new job opportunities in forestry by means of a four-step iterative process, applying the ethics evaluation framework to facilitate a systemic and contextual approach to the ethical issues related to the design, *iii*) development and implementation of new technological solutions, *iv*) Stakeholders' awareness levels

and their perception concerning the introduction of new innovative technologies will be studied to early identify potentialities and showstopper to the full exploitation of the project outcome and v) identification of potential regulatory barriers regarding the introduction of digital solutions in the forestry sector and subsequently for the development of mitigation actions and recommendations on how to overcome such barriers for the entire forest-wnw supply chain stakeholders.

2.1 The DIGIMEDFOR Work-Packages

Besides the Project Management work package (WP1), the project is structured in 6 technical work packages:

- WP1: Project Management,
- WP2: Forest digitalization,
- WP3: Grading and traceability of wood resources,
- WP4: Forest management decision support systems
- WP5: Demonstration and evaluation with end-users
- WP6: Sustainability, uptake and adoption
- WP7: Stakeholders' engagement, Dissemination and Communication

WP1, led by UNINA (Department of Agricultural Sciences), will set the basis of the project that will run for a total duration of 36 months. WP2 "Forest digitalisation", led by CERTH, will apply a multi-platform approach to integrate the existing national inventories with new spatial and non-spatial forest attributes and thus digitalize and harmonise forest inventory data. WP3 "Grading and traceability of wood resources", led by CNR-IBE, will establish a link between the wood resource assortment origin and the final product of the industrial process by delivering to the stakeholders' optimization tools for certification of sustainable forest management, ecosystem services, wood traceability and logging activities. WP4 "Forest management decision support systems", led by UNINA, will develop and implement informed decision systems to support forest-management decisions, from strategic (e.g., wood supply plans) to tactical (e.g., merchantable wood products, road construction) and operational (e.g., harvest scheduling).



Figure 1. DIGIMEDFOR WP Structure

WP5 "Demonstration and Validation with end-users", led by DBL, will engage relevant stakeholders in the implementation of DigiMedFor solutions in forest pilots and replication sites and will carry out an impact assessment of DigiMedFor solutions. WP6 "Sustainability, uptake and adoption", led by PEDAL, will identify suitable customers and respective value propositions across application areas, exploring and defining evidence-based business models along the forest-wnw supply chain, as well as viable commercialisation paths, based on the results of preliminary analyses, focused on future workforce scenarios, ethical, legal and regulatory issues. Finally, WP7 "Stakeholders' engagement, Dissemination and Communication", led by ELARD, will take care of communication, dissemination and stakeholders' engagement. The structure is based on the following management principles: a) all the partners actively contribute to all the major technical tasks, to ensure effective work integration; b) an iteration is planned to design and deliver the DigiMedFor solutions, integrate them and produce the DigiMedFor Virtual Forest DSS; c) DigiMedFor solutions are designed in close cooperation with their end-users.

2.2 **DIGIMEDFOR Organisation**

The information included in this Section and in the following ones is partly taken from the Grant Agreement [1] and from the Consortium Agreement [2] and developed in line with the Horizon Europe (HE) online manual [3]. DIGIMEDFOR Grant Agreement has been developed based on the Horizon Europe Annotated Model Grant Agreement [4].

2.3 Consortium Members

DigiMedFor brings together 21 partners from 8 EU countries (Belgium, Croatia, Finland, France, Greece, Italy, Slovakia, Spain) plus 3 extra-EU countries, Tunisia, Turkey and

Ukraine, covering most of the Mediterranean basin. The consortium adopts a multi-actor approach, involving different actors able to cover all the segments of the forest-wood -non-wood (wnw) supply chain and bringing cutting-edge and cross-sectoral scientific innovations. DigiMedFor consortium includes partners that combine (a) research skills (UNINA, CERTH, CNR-IBE, MARMARA, INRGREF, FORZA, CREAF-CERCA, CESEFOR), (b) technical competencies and digital technology providers (TV, CERTH, CESEFOR, CREAF-CERCA, TRESTIMA, MG), (c) end-users representing the forest-wnw supply chain, ranging from forest public authorities (MARMARA, INRGREF, KAVALA, FORZA) and private forest owners and managers (CFC, FOR-HR, FOR-FR, FMMF) to global alliances of national forest certification schemes (PEFC) to forest-wnw industry associations (Conlegno), (d) exploitation and business capabilities (PEDAL), (e) user research and co-design competencies (DBL) as well as (f) stakeholders' networks (PEFC, Med Model Forest Network, Conlegno, ELARD).

| Participant No. * | Participant organisation name | Country |
|-------------------|--|----------|
| 1 (Coordinator) | UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II (UNINA) | Italy |
| 2 | DEEP BLUE SRL (DBL) | Italy |
| 3 | ASSOCIAZIONE FORESTA MODELLO DELLE MONTAGNE FIORENTINE (FMMF) | Italy |
| 4 | FUNDACION CENTRO DE SERVICIOS Y PROMOCION FORESTAL Y DE SU INDUSTRIA DE CASTILLA Y LEON ES (CESEFOR) | Spain |
| 5 | TRESTIMA OY (TRESTIMA) | Finland |
| 6 | EUROPEAN LEADER ASSOCIATION FOR RURAL DEVELOPMENT, AISBL (ELARD) | Belgium |
| 7 | TOPVIEW SRL (TOP) | Italy |
| 8 | DIMOS KAVALAS (KAVALA) | Greece |
| 9 | ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS (CERTH) | Greece |
| 10 | CONSORCI FORESTAL DE CATALUNYA (CFC) | Spain |
| 11 | CONSIGLIO NAZIONALE DELLE RICERCHE (CNR-IBE) | Italy |
| 12 | CENTRO DE INVESTIGACION ECOLOGICA Y APLICACIONES FORESTALES (CREAF-CERCA) | Spain |
| 13 | FORÊT MODÈLE DE PROVENCE (FOR-FR) | France |
| 14 | MODEL FOREST ISTRIA (FOR-HR) | Croatia |
| 15 | ASOCIACION PARA LA CERTIFICACION ESPANOLA FORESTAL - PEFC ESPANA (PEFC ES) | Spain |
| 16 | PEDAL CONSULTING SRO (PEDAL) | Slovakia |

Below the full List of the DIGIMEDFOR partners.

| 17 | MARMARA FORESTRY RESEARCH INSTITUTE (MARMARA) | Turkey |
|----|--|---------|
| 18 | INSTITUT NATIONAL DE RECHERCHES EN GÉNIE RURAL, EAUX ET FORÊT (INRGREF) | Tunisia |
| 19 | SERVIZI LEGNO-SUGHERO CONSORZIO*CSLS O CONLEGNO (CONLEGNO) | Italy |
| 20 | MARE GROUP (MG) | Italy |
| 21 | AGENCY FOR SUSTAINABLE DEVELOPMENT OF THE CARPATHIAN REGION (FORZA) | Ukraine |

2.4 Management Structure and Procedures

This section describes the management structure for DIGIMEDFOR. The DIGIMEDFOR management structure has been designed to ensure that the project components are properly coordinated, the processes are carefully followed, and the project achieves the expected results. The management activity will deal with:

- The definition, release, management and control of the work packages, including check of their activities and partners' contribution;
- The initiation and implementation of corrective actions, in case of deviation from expected achievements, and risk management and implementation of mitigation strategies;
- The Organisation of progress meetings and reviews;
- The communication with EC project officer;
- The compliance with legal, ethical, financial and administrative regulations (including cost/schedule planning & control);
- The quality check of internal and external deliverables and communication products.

During the project, periodic comparisons between the estimated and the actual schedules, resources, progress of the work will be performed to monitor the status of the project and quickly decide upon actions to be performed to resolve potential deviations. To ensure quality of coordination and achievement of the expected results, a clear organizational structure for DIGIMEDFOR governance and decision making has been defined and is presented in the following sections.

2.5 Management Bodies

The Project Management structure is explained hereafter.

The **Project Coordinator (PC)** will be responsible for the proper use of the funding by the recipients and will ensure that they comply with certain obligations under the GA through control measures and corrective actions. During the project's life, a financial/administrative manager will be appointed. He/she will be in charge of the administrative rules and procedures and will clarify the obligations agreed by the beneficiaries in the Grant Agreement.

The **Steering Committee (SC)** will be the main decision-making body which holds the highest level of authority in the project, being the responsible to ensure agile and effective decision process and project completion. It consists of one representative from each partner, having

one vote. The SC will meet in face-to-face meetings. The SC will discuss and decide on strategic project orientation, updated work programs, approval of Periodic Reports and Deliverables, resource allocation. Finally, the SC will act as the highest conflict resolution body within the project.

The **Project Management Team (PMT)** will consist of all Work Package leaders, and it is chaired

by the project coordinator. The PMT supports the coordinator on the technical and scientific work by ensuring and supervising the quality of the project's results through the revision of each deliverable. This includes planning and control of the activities within the WPs, the preparation of deliverables and the collection of the contributions from other partners participating in each WP for

internal and external report. The PMT can raise important issues and propose solutions to the SC,

but does not have a decision-making capacity. Finally, the PMT with the coordinator will ensure an

effective knowledge transfer with external bodies and initiatives through the AB. The PMT will convene face-to-face at least every 6 months (when possible combined with other meetings, such as Steering Committees) and will keep periodic communication to provide a proper overview of

project progress.

The **Innovation Management Team (IMT)**, led by PEDAL and including all WP6 partners, will be in charge of the identification of commercially exploitable ideas and results generated within the project. Furthermore, it will support the PC in understanding scientific/technical, market and social problems during the lifecycle of the project. Finally, it will be responsible for the close involvement of stakeholders and potential users of the project outputs, for protecting and managing Intellectual Property Rights (IPR), for exploring market opportunities and for prototyping scenarios and responsive business models.

An **Advisory Board (AB)** will be defined by month three and all members will be listed in D7.1. The AB will support the definition of project strategic goals and will steer project progresses. The AB will provide feedback and valuable knowledge stream based on their own experience and information during workshops or remote requests for support (such as participating to interviews or surveys). Additionally, it will facilitate the dissemination of the project results among its networks.

3 GANTT Chart

The schedule listing the project's milestones, activities, and deliverables with estimations in terms of resource allocation, duration and main meetings are shown in the Gantt chart below. The Project Coordinator (PC) monitors and coordinates the work plan, especially the milestone achievement. The WP leader is responsible for the schedule within his/her WP. The WP leader must communicate with the PC in case any problems or delays rise during the project timeline.

| | 1 YEAR | | | | | | | 2 YEAR | | | | | | 3 YEAR | | | | | | | | | | | | | | | | | | | | |
|-----|--------|----|-------|--------|------|------|--------|--------|-------|-------|-------|-----|-----|--------|-----|-----------|-------|-----|-----|---------|---------|---|--------|-----|-----|-----|-----|-----|-----|-----|--------|---------|---------|---------|
| | M1 | M2 | M3 | M4 M | 5 M6 | M7 N | 18 M | 9 M1 | .0 M1 | 11 M1 | L2 M1 | M14 | M15 | M16 | M17 | M18 M1 | 9 M20 | M21 | M22 | M23 | M24 | M25 | M26 | M27 | M28 | M29 | M30 | M31 | M32 | M33 | M34 | M35 | M36 | |
| | | D | 1.1 | | D1 | .2 | | | | | | | | | | D1.3 | | | | | | | | | | | | | | | | | D1. | 4 |
| WP1 | | | | | | | | | | | | | | | | ÷ | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | [| D2.1 | and D | .2 | | | | | | | | | D2 | .3 | | | | | | | | | | | | |
| WP2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | MS1 | | | | | | VIS2 | | E | D3.1, I | D3.2, E | 03.3 a | nd D3. | .4 | | | | | | | D3.5 | 5, D3.6 | , and D | 3.7 |
| WP3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | D4 | .1 | | D4.2 | | | | | | D4 | 1.3 | | | | | D | 1.4 | | | | |
| NP4 | | | | | | | | | | | | | | | | | | | _ | | | | | | | | _ | | | | | | | |
| | | | | | | | | | | | D5.1 | | | | | Б | MS2 | | | | | 22 | | | | | | | | | D | 5.2 | D5.3 | MS5 |
| WD5 | | | | | | | | | | | V | | | | | | 152 | | | | 101. | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | | | | | | | _ | Υ. | 4 | |
| | | | | | | | | | | D6.1 | and D | .2 | | | [| D6.2 | MS2 | | | | De | 5.8 | | | | | | | | D6 | .3 and | d D6.7 |] [|)6.4 ar |
| WP6 | | | | | | | | | | | , v | | | | | | | - | | | | * | | | | | | | | | | | | |
| | ▼ | | D7 | .1 | D7 | .3 | | | | | | | | | D7 | .2 and D7 | .4 | | [| D7.5 | ן (| MS4 |] | | | | | | | | | D7 | 7.6 | D7.7 ai |
| WP7 | | | | | | | | | | | | | | | | * | | | | | | | | | | | | | | | | | ľ | |
| | • | De | elive | rables | | V N | lilest | one | | | | | | | | | | | | | | | | | | | | | | | | | | |

Figure 2: DIGIMEDFOR GANTT

| Milestone n. | Milestone name | Related WP | Due date (in month) | Means of verification |
|-----------------|--|---------------------|---------------------------|---|
| MS1 | DigiMedFor inventories | WP2 | 12 | The inventories of the selected forests have been uploaded to DigiMedFor Knowledge Platform |
| MS2 | Integration of data from WP2-WP3 activities in the DigiMedFor Knowledge Platform | WP2- WP3- WP4 | 19 | DigiMedFor Knowledge Platform is up and running |
| MS3 | Integration of Al- based and process- based models in the VFDSS | WP4 | 24 | The VFDSS is up and running |
| MS4 | DigiMedFor business models | WP6 | 24 | The business models related to the DigiMedFor solutions have been defined |

Below the list of Milestones against with project progresses are monitored.

| MS5 | DigiMedFor solutions evalutation | WP5 | 36 | DigiMedFor pilots and replications have been carried out and the report on evaluation and impact assessment is submitted to the EC |
|-----|-------------------------------------|-----|----|--|
|-----|-------------------------------------|-----|----|--|

4 Management Plan

In this Section, we provide a detailed description of the management procedures. Part of the information is taken from Grant Agreement Annex I – DoA [1], while additional information was created ad hoc for this document.

4.1 Legal, Financial and Administrative Management

The coordinator manages the legal, financial and administrative aspects of the project following the contractual rules.

The Consortium Agreement (CA) provides measures on the arrangement of IPR, exploitation rights, confidentiality, decision and change-procedures, cooperation after the end of the project, and negotiations with third parties [1][2].

4.2 Decision procedures

The general principle will be to try to achieve decisions by informal means and consensus, using formal procedures such as voting only when essential. All decisions that can have an impact on project progress (whether reached formally or not) will be documented for clarity and common understanding within the Consortium.

The DIGIMEDFOR Consortium recognises that the resolution of problems and conflicts must be handled systematically. Establishing a good working relationship and fruitful collaborations among project team members will be a pre-requisite for the quick resolution of problems and issues.

Conflicts will have to be resolved at the lowest possible level; those that cannot be solved will be taken through a "principled negotiation" process that is focused on optimising outcomes and maximising the benefits of all parties involved. Additionally, specific decision and corresponding voting procedures are defined in the Consortium Agreement.

4.3 Financial provisions

During the whole project life, the Project Coordinator will provide the overall accounting management, including the allocation of budget and the transfer of funds in accordance with the EC deadlines and rules. He will ensure that certificating institutions will be contacted in reasonable time to carry out the required financial audits and will also verify if minor rescheduling is needed in order to keep the overall project work on schedule or, where this is not possible, he will involve the appropriate decision-making bodies.

Payments to Parties are the exclusive tasks of the coordinator.

In particular, the project coordinator (PC) shall:

- Notify the Party concerned promptly of the date and composition of the amount transferred to its bank account, giving the relevant references.
- Perform diligently its tasks in the proper administration of any funds and in maintaining financial accounts.

Each partner will use the procedures that already exist within their organisation and that are normally used for the Horizon Europe projects in which they are involved.

As projects may be subject to audits by EC, all costs will be auditable: all partners, in accordance with their own usual accounting and management principles and practices, will be able to provide records of effort spent together with all receipts for travels and other expenses.

4.4 Collaboration and Communication management

4.4.1 Cooperative Working Environment

In the DIGIMEDFOR project we will use <u>Microsoft OneDrive (SharePoint)</u> as collaborative platform procured and administered by UNINA.

Microsoft OneDrive contains functionalities for sharing files and collaborative authoring of documents, with file versioning. Using OneDrive enables secure storage for project assets during the entire project.

By reducing dependency on email for communication, active use of OneDrive will ensure that project history is accessible to any future project members, whenever they may be introduced to the project.

A default repository structure has been already created for DIGIMEDFOR, based mainly in the WP structure of the project as defined by the DoA [1].

WP folders follow a common structure:

- Deliverables: folder containing the working and final versions of the deliverables of the WP.
- Working material: folder storing other sub-folders containing working documents in the WP.
- Meeting material: folder created for each meeting storing agenda and presentations.

4.4.2 Public Website

The DIGIMEDFOR website will have an essential role in the project dissemination. It is still under construction, and the fully functional website, in Month 8, will be the principal means of communication of the project objectives, activities and results, also providing information on the structure of the Consortium. The website will offer a range of functionalities, including document download, links to other relevant projects' websites and contact information. The website aims to offer a comprehensive view of the project, including current project results, public reports and publications, information about project events, and more. Its purpose is to effectively communicate the project's objectives, progress, and outcomes to a broad audience.

The public website will facilitate communication and interaction within DIGIMEDFOR and will also improve dissemination to specialists, potential users, politicians, and public funding

authorities, as well as the general public. It will be updated on a regular basis with public information about DIGIMEDFOR progress, status of the activities, dissemination events organised, news and any other relevant communication. Particular attention will be given to the usability and simplicity of the website to facilitate the users in the information search and the contents' comprehension. The information provided by the website will be categorized in a logical and significant way, and the pages will be organized in a simple layout with clear sections and texts.

ELARD is responsible for the graphical layout, the information architecture and technical implementation of the website. The partners of the consortium will contribute to the website by providing information, documents, news, or any other material that they consider useful to disseminate the progresses of the project. All the contents must be approved by the Project Manager before being published. To monitor the website usage and access an analysis tool will be used, Google Analytics. It provides any kinds of information about the website: visitors, traffic sources, most viewed contents, etc. It is a helpful means to identify possible problems, to increase the website's efficiency, and to evaluate the website impact and effectiveness.

4.4.3 Participant Portal

It is the official EU Portal for the submission of deliverables, technical and financial reporting, ethical requirements, and amendments **Errore. L'origine riferimento non è stata trovata.**, specifically:

- Submission of project deliverables;
- Periodic Technical & Financial Reporting;
- Final Technical & Financial Reporting;
- Risk & Issues Management;
- Requests for Amendments;
- Implementation of Ethics Requirements;
- Submission of Final Project Results Report.

The EU Funding & Tenders Portal is the central electronic portal for all EU funding and tenders. It is managed by the European Commission and used by itself and other EU services for their grants, prizes and procurements.

4.4.4 Communication Tools

The Project Coordinator (PC) will set up a communication system to facilitate the cooperation.

Electronic Mail (e-mail) will be the principal means of interpersonal communication. It is informal, fairly rapid, but best suited for non-critical information. A project mailing list will be created: <u>DIGIMEDFOR@unina.it</u>. More ad hoc mailing lists will be created: one for administrative purposes only, one for each WP (i.e. <u>DIGIMEDFOR-WPx@unina.it</u>). For a suitable use of the e-mail, here are some rules to be followed by DIGIMEDFOR members:

- Use the official mailing lists;
- It is recommended that each project participant looks at his/her e-mail at least once a day to see if there is any mail awaiting attention;

- If you do not use the mailing list, address information ONLY to involved parties in communication: do not systematically put everyone in copy.
- Use explicit Subject title:
 - An identifier appended in front of the subject line, like [DIGIMEDFOR];
 - An identifier of the WP, like [WP2, WP3, WPx]
 - A clear indication of the content (for instance, "Meeting minutes 2024-04-03").
- Mailing lists have a limit on the size of messages, so attachments should be avoided, in favour of document storage on the OneDrive (4.4.1) repository. The OneDrive link to a particular file can be shown in the e-mail message instead of attaching a document.

Another means of communication can be teleconferencing, a powerful tool for organising short meetings. They can be organised with short notice (notifying it sufficiently in advance); participants only need a telephone line or an Internet connection set to participate and do not need to spend time travelling. UNINA will make available its Microsoft Team facility. Both tools will be used according to partners preferences and constraints.

4.4.5 Project Meetings

Interactive management meetings and technical meetings play an important role in the project. DIGIMEDFOR meetings will include the following:

| Type of meeting | When | Who | What | How |
|---|----------------------------------|---|--|--------------------------------------|
| Progress meetings | Every 6 months | All the partners | Coordinate and monitor work | Face2Face or video conferences |
| WP/Task meetings | At least once a month | WP/Task participants | Coordinate and monitor work | Face2Face or video conferences |
| Ad-hoc meetings / Roundtables | Whenever needed | WP/Task participants, Selected Advisory Board Members | Data collection from experts (top-down approach) | Face2Face or video conferences |
| Project review meeting | Once per year | All the partners + European Commission | Project review, collection of feedback on project activities, risk management and identification of corrective actions | Face2Face |
| DIGIMEDFOR Dissemination events | Four during the project lifetime | All the partners + Advisory Board + external stakeholders | Data collection from experts (bottom-up approach) | Face2Face |
| Final DIGIMEDFOR Dissemination event | M36 | All the partners Advisory Board, general public and external experts | External dissemination of project results | Face2Face |

4.4.6 Organisation of the Meetings

In the paragraphs below, best practices for the organisation of the DIGIMEDFOR meetings are described.

Types of meetings

There are two types of meetings: (i) face-to-face and (ii) video conference.

The consortium has planned to physically meet face-to-face at least one times a year, where progress, periodic meetings, SC and PMT meetings will be co-located over a period of 1.5-2 days, at the premises of the project partners (volunteering to host the meeting). If possible, project meetings can be organized in conjunction with key events that DIGIMEDFOR partners plan or may have an interest to participate.

The consortium partners are in eight different European and three extra-European countries. For the face-to-face meetings it is important to consider:

- If another face-to-face meeting is scheduled at the same time. Verify if it's possible to jointly conduct the two meetings in order to optimize the cost;
- Evaluate the time and, if it's possible, avoid critical timing (e.g., holidays, international events, etc.);
- Evaluate how easy it is to reach the place and city of choice;
- Consider the precedent location of the face-to-face meeting giving equal opportunity to each partner to host meetings.

Conference call meetings are foreseen to facilitate partners' collaboration and the organisation of additional meetings. These meetings enjoy the same rules as the other standard meetings, and will be used for progress meetings and WP meetings, whenever it is necessary.

Responsibilities of partners

The hosting partner should give information related to arrival and departure times and, where appropriate, requirements for hotels. The hosting partner is responsible for the coffee breaks, lunches and dinners' organisation taking into account special meals, if needed.

A call bridge should be created to facilitate the participation of people who cannot join (DIGIMEDFOR members or EC representative).

Agendas and minutes will be prepared and shared by the chairperson of the meeting and shall be made available to all consortium members on the OneDrive (4.4.1) repository.

Each Partner:

- Should be present or represented at any meeting;
- May appoint a substitute or a proxy to attend and vote at any meeting; and
- Shall participate in a cooperative manner in the meetings.

Each participant to a meeting should contribute to the meeting preparation by providing in advance to the meeting:

- Contributions to the agenda;
- Preparation of presentations;
- Working documents: normally the main subjects discussed during a meeting will be documented by discussion papers or presentations. As far as possible, these means should be distributed in advance and not during the meeting itself, since otherwise the participants will be unable to prepare for the meeting;
- Feedback on the minutes in case of disagreement;
- Execution of actions and respect of decisions.

The Coordinator will have the special responsibility of contributing to the definition of meeting objectives, and the preparation of decisions, agenda and minutes.

The Coordinator for plenary meetings or the WP leader for the WP meetings will be the chairperson, unless decided otherwise.

Agenda of the meetings

Each meeting must have an agenda. The draft agenda should be distributed in advance (15 working days), to inform the participants about the topics to be discussed and to give them the

opportunity to suggest changes to the agenda which must then be re-circulated. Comments and integration can be done before sharing the final agenda (5 working days before the meeting). The agenda lists the subjects which are planned to be discussed. It is an instrument to assist the facilitator in monitoring the meeting. Secretarial work is also minimised by a well-structured agenda.

Each agenda contains some standard subjects with the following structure:

- type of meeting
- list of participants
- <place>
- <date>
- <time> Opening and welcome.
- <time> Objectives of the meeting and agreement about the agenda.
- <time> Remarks on previous minutes (only if applicable).
- <time> Action points (only if applicable).
- <time> Meeting specific subjects.
- Explanation of subject (issues to decide upon, actions to decide, etc.)
-
- <time> Sum up and closing:
 - Date and place of next meeting(s) (only if applicable)
 - Define list of open issues.
 - Summarise decisions and actions list.

<place> is the location of the meeting, <date> is the day for which the agenda is valid; multipleday meetings have an agenda for each day. <time> defines the planned time to start discussion on a topic.

If breaks, lunch and dinner are planned, these events should be included in the agenda.

During a meeting this agenda can be modified by adding items if it's necessary.

Minutes

Particular attention must be given to the follow-ups of the meeting; send the minutes quickly, check commitment on decisions and actions with absent Partners, ensure that decisions are respected, and actions executed.

The Project Coordinator (PC) for general meetings or the WP leader in charge of the agenda is in charge of the minutes. She/he can appoint a person to produce written minutes, which shall be the formal record of what was discussed during the meeting. The minutes shall be sent to all project members (preferably within 10-15 calendar days of the meeting). The minutes shall be considered as accepted if no one sends an objection (within 7 calendar days from receiving them).

The minutes will therefore constitute a sort of "pocket handbook" with all the data that each of the participants will always have to keep an eye on.

The minutes will reflect major issues that have been discussed. All minutes of periodic meetings will have the same structure. Minutes should contain the following information:

- meeting date;
- location;
- author;
- participants;
- objective of the meeting (brief);
- actual agenda;
- list of documents distributed during the meeting with reference to the author (if applicable);
- and for each point addressed as part of the agenda:
 - summary of discussion (if relevant);
 - o decision;
 - o open issues;
 - o action;
 - supporting information (if relevant).
- summary of the action list;
- place and date of the next meeting (if applicable).

Minutes of meetings involving the EC shall also be distributed via email for review by the EC officer. Action updates should be regularly (monthly) be sent to the EC. For all meetings involving the EC, the EC shall be asked to review the minutes before their approval.

4.4.7 Deliverable Production

The list of DIGIMEDFOR deliverables is reported in the following table (see Gantt Chart at section 3).

| Number | Deliverable name | WP # | Deliverable leader | Туре | Diss level | Delivery date (Month) |
|--------|--------------------------------------|------|-----------------------|------|---------------|-----------------------------|
| 1.1 | Project Management & Quality Plan | 1 | UNINA | R | PU | 2 |
| 1.2 | Data Management Plan initial plan | 1 | UNINA | DMP | PU | 6 |

| 1.3 | Data Management Plan intermediate plan | 1 | UNINA | DMP | PU | 18 |
|-----|---|---|----------|-------|----|----|
| 1.4 | Data Management Plan final plan | 1 | UNINA | DMP | PU | 36 |
| 2.1 | Report on DigiMedFor forest data | 2 | CESEFOR | R | PU | 12 |
| 2.2 | DigiMedFor toolkit for forest managers to measure forest variables and attributes | 2 | CESEFOR | OTHER | PU | 12 |
| 2.3 | DigiMedFor digital tool for inventory of Mediterranean forest resources | 2 | TRESTIMA | DEM | PU | 24 |
| 3.1 | DigiMedFor tool for in-situ wood evaluation and grading | 3 | CNR-IBE | DEM | PU | 24 |
| 3.2 | Final version of the DigiMedFor tool for in-situ wood evaluation and grading | 3 | CNR-IBE | DEM | PU | 35 |
| 3.3 | DigiMedFor Data Traceability Platform System | 3 | τv | DEM | PU | 24 |
| 3.4 | Final version of the DigiMedFor Data Traceability Platform System | 3 | TV | DEM | PU | 35 |
| 3.5 | DigiMedFor picture-based tracking system | 3 | CESEFOR | DEM | PU | 24 |
| 3.6 | Final version of the DigiMedFor picture-based tracking system | 3 | CESEFOR | DEM | PU | 35 |
| 3.7 | Guidelines for the digitalization of ecoservices provided by certified forests | 3 | CREAF | R | PU | 24 |
| 4.1 | DigiMedFor Knowledge Platform | 4 | CESEFOR | DEC | PU | 18 |
| 4.2 | AI-based predictive models | 4 | CERTH | R | PU | 16 |
| 4.3 | Process-based mathematical model | 4 | UNINA | OTHER | PU | 20 |
| 4.4 | DigiMedFor VFDSS | 4 | MG | DEC | PU | 32 |
| 5.1 | Pilot evaluation handbook | 5 | DBL | R | PU | 12 |

| 5.2 | Results coming from the pilot and replication sites | 5 | DBL | R | PU | 34 |
|-----|---|---|----------|---|----|----|
| 5.3 | Evaluation, impact assessment and lessons learnt from the pilots | 5 | DBL | R | PU | 36 |
| 6.1 | Prospective customers and value propositions | 6 | PEDAL | R | PU | 12 |
| 6.2 | Go-To-Market Plan and Strategy | 6 | PEDAL | R | PU | 24 |
| 6.3 | Initial Exploitation Plan | 6 | PEDAL | R | PU | 18 |
| 6.4 | Exploitation and Sustainability Plan | 6 | PEDAL | R | PU | 35 |
| 6.5 | Skills Transformation Map | 6 | DBL | R | PU | 36 |
| 6.6 | Recommendations on how to mitigate ethical and liability risks | 6 | DBL | R | PU | 36 |
| 6.7 | Regulatory framework | 6 | Conlegno | R | PU | 12 |
| 6.8 | Recommendations on compliance and adaptation of standards | 6 | Conlegno | R | PU | 35 |
| 7.1 | Dissemination and communication strategy and plan | 7 | ELARD | R | PU | 3 |
| 7.2 | Updated dissemination and communication strategy and plan | 7 | ELARD | R | PU | 18 |
| 7.3 | Stakeholders' engagement and consultation Plan | 7 | DBL | R | PU | 6 |
| 7.4 | Practice abstracts – batch 1 | 7 | DBL | R | PU | 18 |
| 7.5 | Joint Policy Brief (DIGIMEDFOR-SINTETIC)- Early quality assessment of timber products | 7 | CNR | R | PU | 23 |
| 7.6 | Policy brief – Sustainable management of Mediterranean forest ecosystems by means of digital solutions | 7 | UNINA | R | PU | 35 |
| 7.7 | Practice abstracts – batch 2 | 7 | DBL | R | PU | 36 |

| 7.8 | Final Report on dissemination, | 7 | ELARD | R | PU | 36 |
|-----|---|---|-------|---|----|----|
| | communication and stakeholder's engagement activities | | | | | |

All deliverables will be written with contributions from several partners. To minimise the effort for handling such documents, it is hence important to agree on standards for formats and tools to be used in document editing and exchange following an agreed delivery process to ensure their consistency and quality, and minimise the risk that deliverables will be rejected by EC.

The right size for a given deliverable depends largely on the topic, the purpose, etc., but very long deliverables create several problems:

- It takes longer to write and revise them;
- They are not easily readable and prone to lose the focus.

Therefore, we must design deliverables to be clear about the objective, and then be very concise about the content to include in the documents. The focus must be clear and specific. It must also avoid repeating content from other documents (always use references for that).

It is of utmost importance to have a clear Executive Summary, an Introduction containing the objectives and the structure of the document, as well as a Conclusions section. All the project official documents will be produced according to the templates and guidelines supplied by the EC at the beginning of the project.

The official editing tool for deliverables will be: Microsoft Word 2010 or newer. Other editing suite tools can be used under the following conditions:

- Deliverable editor must agree with contributors in advance;
- Deliverable editor must provide the template for the new format that must match with the official template provided by the EC;
- If a contributor does not use the selected editing tool/format, the deliverable editor is responsible for integrating these contributions in the official editing format/tool.

4.4.8 Deliverable and File naming convention

All the project's documents will be managed with OneDrive Online, the collaborative tool provided by UNINA, accessible to DIGIMEDFOR members (for details see Section 4.4.1).

This will reduce the exchange of the documents via email. The documentation that does not have to be edited, e.g., the documentation that has to be distributed externally to the Consortium, will have to be saved/converted/distributed in Portable Document Format (PDF).

Interim deliverable versions and the final version should be kept in the project repository, in the corresponding deliverable folder for availability of the consortium members. The final version will be also saved as a pdf file and submitted through the Participant Portal to the EC. Public deliverables (once approved by the EC) will be available on the DIGIMEDFOR website. All the project deliverables will be archived according to Horizon Europe requirements.

4.4.9 Roles in the deliverable

Each deliverable tackles a specific subject, and the deliverable leader should produce the document and co-ordinate the work of the partners involved. The following are the roles of participants in the process of production of deliverables:

- **Deliverable leader:** is the main editor and leads the deliverable production process. The leader is responsible for the submission of a high-quality deliverable in due time and is also the main contact point with the other roles, being in charge of uploading the document to the right location in the project repository and of notifying the peer reviewer, the quality manager and the Project Coordinator for the final approval whenever the document is ready for the next step in the deliverable production process.
- **Deliverable contributor:** participates in the production of the deliverable by contributing with content and supporting the leader in producing a high-quality deliverable, addressing reviewers' comments and requests.
- **Deliverable peer reviewer:** will be appointed in advance and should not be a direct contributor to the deliverable. S/he is responsible for carefully reviewing the content of the deliverable, ensuring the deliverable objectives are met from a scientific/technical point of view. A proof-reading is expected by the peer reviewer as well. Comments can be provided in the document using MS Word features such as track-changes or review comments. The peer reviewer must upload the deliverable document (with comments) and the review report to the project repository and notify the deliverable leader accordingly.
- **Deliverable quality manager:** this task is assigned to UNINA as Project Coordinator. The Project Manager will perform a last round of proof-reading, to find and correct typographical errors and mistakes in grammar, style, spelling, and layout.

The project coordinator will formally hand-over to the EC the finalized deliverables for a quality assessment prior to their approval.

4.4.10 Deliverable Review Process

The responsible for each deliverable is the one assigned within the Work Package. The leader as well as all the contributors and peer reviewers are responsible for the quality and correctness of the deliverable's content.

The deliverable elaboration process can be divided in 4 phases:

• The first phase is the preparation of an initial version by the partner officially responsible of the deliverable, based on the template provided by the Project Coordinator.

• The second phase is the completion of the draft by all contributors involved according to the work plan. The deliverable drafting should be finalised at least 3 weeks before the deliverable deadline to be reviewed.

• During the third phase, the deliverable will be checked by the peer reviewer and all the comments will be included for a forward clarification. This phase should end at least 10 calendar days before the deliverable deadline.

• As a last step, the partner responsible for completing the deliverable will integrate the comments and recommendations to obtain the final version. This final document will be sent to the Project Coordinator for a final quality check and for sending the deliverable to the European Commission.

4.4.11 Deliverable and File naming convention

All the documents elaborated within the DIGIMEDFOR project should follow a general naming convention for file names:

Dx.y Title_vz.w, where:

- Dx.y represents the deliverable number (where 'x' represents the WP number and 'y' the deliverable number within that WP)
- Title corresponds to the deliverable title
- 'z.w' corresponds to the description (e.g. 'draft', 'final') version number (v) of the deliverable, starting at 0.1 and the first delivery to EC being 1.0.

e.g. D1.1_Project-management-plan_draft_v0.1

4.4.12 Progress Reporting

The action is divided into the following Reporting Periods [1]:

- RP1: from month 1 to month 18;
- RP2: from month 19 to month 36;

The coordinator must submit a periodic report within 60 days following the end of each reporting period.

Each WP leader should submit a WP Report to the Project Coordinator, who assembles the parts and elaborates the Progress Report.

The coordinator must submit to the EC the technical and financial reports, including when needed the requests for payment and must be drawn up using the forms and templates provided by the EC.

4.4.13 Periodic Technical and Financial Reporting

A Periodic Technical and Financial Progress Report shall be submitted via the Horizon Europe Participant Portal SEDIA (Single Electronic Data Interchange Area) every 18 months within 60 working days following the end of the Reporting Period.

The content of the Technical and Financial Progress Reports is detailed in the Horizon Europe User Manual. An extract is provided below; however, the latest version of the Horizon Europe User Manual remains the reference.

Periodic Technical Report

A Technical Progress Report shall provide a qualitative summary of the work performed according to Horizon Europe guidelines [3]. It consists of **Part A** and **Part B**:

Part A contains:

- 1. the cover page
- 2. a publishable summary, including:
 - An executive statement on the progress made and key issues;
 - Achievements made in the last reporting period, i.e. milestones, meetings, and tasks key data;
 - Main targets and events over the next reporting period.
- 3. Tables covering issues related to the project implementation (e.g., Work Packages, Deliverables, Milestones, etc.) which includes:
 - Deliverables (indicating the % completion of deliverables);
 - Milestones;
 - Ethical Issues (if applicable);
 - Critical implementation risks and mitigation measures;
 - Dissemination & exploitation of results;
 - Impact on SMEs (if applicable);
 - Open Research Data (if applicable);
 - Gender.
- 4. The answers to the questionnaire covering issues related to the project implementation and the economic and social impact, notably in the context of the Horizon Europe key performance indicators and the Horizon Europe monitoring requirements.

Part A is generated via the Participant Portal based on the information entered by the participants through the periodic report and continuous reporting modules. The participants can update the information in the continuous reporting module at any time during the life of the project.

Part B of the periodic technical report provides the narrative part that includes explanations of the work carried out by the beneficiaries during the reporting period. It will include:

- 1. Explanations of the work carried out by all beneficiaries and linked third parties during the reporting period;
- 2. An overview of the progress towards the project objectives, justifying the differences between work expected under Annex I and work actually performed, if any;
- 3. An update on Risks and Issues.

Part B needs to be uploaded as a PDF document. It must be consistent with the template of Part B Periodic Technical report.

Periodic Financial Report

A Financial Progress Report shall be submitted every 18 months via the Horizon Europe Participant jointly with the Technical Progress Report.

The periodic financial report consists of:

- 1. Individual financial statements (Annex 4 to the GA) for each beneficiary;
- 2. Explanation of the use of resources and the information on subcontracting and in-kind contributions provided by third parties from each beneficiary for the reporting period concerned;
- 3. A periodic summary financial statement including the request for interim payment.

Internal periodic financial progress report will be requested every six months by project coordinator (PC) to monitor effort and costs. A dedicated excel template will be shared by the PC.

Final Periodic Technical/Financial Report

The Final Report covers the whole project and is composed of a Final Technical and a Final Financial part. It is delivered within 60 days from the completion of the Action.

In case not all deliverables have been submitted in time before the completion of the Action, the Project may ask for an extension, as an exception, using the Amendment procedure.

Final Periodic Technical Report

The Final Periodic Technical Report is a publishable summary of the entire project. It provides:

- 1. An overview of the project scope and objectives;
- The achieved results and main conclusions, including a self-assessment of the TRL (Technology Readiness Level) achieved at the end of the project based on the criteria defined by EC supporting the claimed project readiness to transfer its results to the next R&I phase;
- 3. The performed communication and dissemination actions;
- 4. The Exploitation and follow-up activities proposed for the next stage of the R&I lifecycle;
- 5. The socio-economic impact of the project;
- 6. An up-to-date link to the project website;
- 7. Project logos, diagrams, photographs and videos illustrating its work (if available).

The final summary must be written in a style understandable for a non-specialist audience. The coordinator must ensure that none of the material submitted for publication includes confidential or 'EU classified' information.

Final Periodic Financial Report

The Final Periodic Financial Report includes:

- The final summary financial statement that is automatically created by the system (consolidating the data from all individual financial statements for all beneficiaries and linked third parties, for all reporting periods) and that constitutes the request for payment of the balance;
- 2. In some cases (and for some beneficiaries/linked third parties) it must be accompanied by a certificate on the financial statements CFS (one certificate per beneficiary/linked third party).

5 Risk and Issues Management Plan

Critical risks are probabilities or threats of negative occurrence relating to project implementation that is caused by external or internal vulnerabilities that may affect project's objectives and that may be avoided through pre-emptive actions.

Issues and opportunities are developments that make changes to the project's planned course desirable and/or necessary. If issues arise during the project, they will be discussed with the Project Officer and identified/updated in the progress reports.

The management of project Risks and Issues will be done through the Periodic Reporting via the Participant Portal SEDIA. This process includes defining and implementing actions to mitigate the Risks and reported in the following section 5.2.

The top Risks will be reported in the Technical Progress Reports in order of criticality and/or priority, together with their impact, status and corrective actions.

5.1 Risk Management

Measures for managing risks related to financial, legal, administrative and technical coordination will be established from the beginning of the project. A contingency plan will be done at the beginning of the project and will be immediately at disposal to be launched when necessary and updated along the project execution. The management structures will:

- manage partners and resources to reach the general goals and objectives of the project on schedule and within budget;
- follow the regulations and serve as contact point for the project with the project officer;
- monitor adherence to EU policies for key issues such as open data access, ethical and security issues, gender-balanced research;
- maintain responsibility for the identified deliverables and supervise the quality control mechanisms;
- monitor and mitigate risks;
- provide equitable and effective mechanisms for the prevention of conflicts and resolution of disputes.
- establish and maintain mechanisms for reliable communication between partners, expert panel members and study participant.

Regarding conflict resolution, the Project Coordinator (PC) will try to minimize conflict and should it arise, act to

minimize its effect through arbitration with the involved partners. As soon as a risk has been identified and needs to be addressed, the PC will be responsible for:

- the definition of new project activities necessary to ensure the mitigation of risk;
- the assignment of the priority level of activity in mitigating the risk index and status of the project;
- the allocation of human resources required to perform the activities of risk mitigation.

5.2 Identified Top Risks

| Description of risk (indicate level of (i) likelihood, and (ii) severity: Low/Medium/High) | WP | Proposed risk-mitigation measures |
|---|-------------|--|
| Conflicts between partners (low, medium) | All | The CA will set down all the expectations and requirements from partners, as well as general indications on how to solve any arising issue. The project coordinator will work with partners to mitigate the issues at hand and de-escalate any conflicts. |
| Partners not performing as expected (low/medium) | AII | The suggested management structure ensures that if such problems arise, they will be properly identified and dealt with. The eventual underperformance will be promptly documented in project meeting minutes and solved by the project steering committee and, if necessary, the EC. |
| Delay of activities related to the Covid-19 (medium/high) | All | Most of the activities may be carried out also remotely. Nevertheless, pilots could suffer from this; the time plan will include buffers to be able to carry out the activities even if COVID-19 restrictions are activated. |
| Forest managers and owners do not share paper documentation | WP2 | Forest managers and owners of nine forests are partners of DigiMedFor and have already committed to sharing their data throughout the project. |
| Extreme weather conditions or local regulations hinder collection of field data (high/medium) | WP2- WP3 | Buffer sampling time (3 months before and 3 months after the programmed sampling period) will be planned. |
| Models/algorithms exchange with Intellectual Property aspects may limit (or in extreme cases prevent) the integration of different modules (medium/medium) | WP4 | Models/algorithms will be open access and thus no problem will arise. |
| The advanced decision- making algorithms have poor performance (low/medium) | WP4- WP5 | To address this risk, a careful exploratory analysis will take place, and a regularisation approach will be considered over feature selection. Thanks to the pilots, continuous testing, cleaning, and auditing process will ensure the accuracy of the decision-making model |

| The VFDSS is too difficult for end users to use (low/medium) | WP4- WP5 | The VFDSS will be adapted to the needs and capabilities of the targeted stakeholders. It will be easy to use, and clear and simple "step by step" guidelines will be provided to users. |
|--|-------------|--|
| The proposed solutions are not compliant with the regulation, have ethical issues and/or are not acceptable for end- users (low/high) | WP5- WP6 | DigiMedFor takes into great consideration regulatory and ethical issues by devoting specific tasks to their analysis and by carrying out an impact assessment of the solutions. In addition, regarding acceptance, the project will evaluate the feasibility, acceptability and usability of the solutions. |
| End-users' resistance to be engaged and adopt solutions (low/medium) | WP5- WP7 | Stakeholders are partners of the project and participate actively right from the beginning of the project in all relevant activities aimed at implementing and evaluating the solutions. |
| Poor dissemination and exploitation of the results (low/high) | WP6- WP7 | Development of the Communication, Dissemination and Exploitation Plans approved by all the partners. Dissemination will be continuously monitored through KPIs. |

5.3 Implementation of Ethical Requirements

Deliverable D6.5 Recommendations on how to mitigate ethical and liability risks will discuss main ethical issues and propose effective mitigation actions. No specific ethical requirements have been identified by EC as additional deliverable.

5.3.1 Ethical dimension of the objectives, methodology and likely impact

Although the objectives comprehend the treatment of datasets, the project falls out of the scope of the personal data and there is no risk of privacy or fundamental rights affection. In order to fulfill some of the objectives, i.e., the delivery of a Skills Transformation Map, DigiMedFor foresees to work with humans but no vulnerable groups will be targeted and in all cases, proper, complete and transparent information and voluntary consent compilation will be ensured. The international scientific cooperation is also an objective of DigiMedFor project. Therefore, DigiMedFor consortium includes the scientific cooperation with Turkey, Tunisia and Ukraine. But no potential risks are foreseen in this sense: activities carried out outside the EU are similar to those planned inside although with different technological challenges. Therefore, no eventual infraction of any EU law is at risk.

5.3.2 Compliance with ethical principles and relevant legislations

The AI developments within the project have been designed accordingly with the trustworthiness guidelines for all the AI-based techniques /systems made in Europe. All the developments performance will be properly quantified and tracked ensuring the possible detection of deviations from expected behavior. Considering the scope of this project, only strictly necessary data will be captured and processed, and datasets will be done fully accessible and provided as open datasets unless there are industrial restrictions, ensuring the multidisciplinary, participatory and collaborative nature of the work. The work proposed here

does not go into conflict with any fundamental right of individuals, safety or discrimination. However, we would like to point out that the developments will be designed as explainable solutions to users, ensuring the transparency. DigiMedFor activities are compliant with Ethical principles and relevant enforce legislation, including GDPR.

The Consortium confirms that compliance with ethical principles and applicable international, EU and national law in the implementation of research activities not originally envisaged (or not described in detail) in the DoA will be ensured. The Consortium also confirms that any ethical concerns raised by those activities will be handled following rigorously the recommendations provided in the European Commission Ethics Self-Assessment Guidelines

References

- [1] DIGIMEDFOR Grant Agreement
- [2] DIGIMEDFOR Consortium Agreement
- [3] Horizon Europe Online Manual https://webgate.ec.europa.eu/funding-tenders-opportunities/display/OM/Online+Manual
- [4] European Commission, Horizon Europe Annotated Model Grant Agreement (AMGA) <u>https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-</u> 2027/common/guidance/aga_en.pdf