

H2020-SC5-01-2017



# MED-GOLD

Turning climate-related information into added value for traditional **MED**iterranean **G**rape, **O**Live and **D**urum wheat food systems

## Deliverable 7.1


### *Communication, Dissemination and Exploitation Management Plan*



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776467.



## DOCUMENT STATUS SHEET

<b>Deliverable Title</b>	<b>Communication, dissemination and exploitation management plan</b>	
<b>Brief Description</b>	This plan outlines the commonly defined communication, dissemination and exploitation strategies to be carried out by the MED-GOLD consortium team to maximize project impact. This will help to have a more consistent and effective relation within project objectives, partners, stakeholders and general public.	
<b>WP number</b>	7	Management and coordination
<b>Lead Beneficiary</b>		
<b>Contributors</b>	Eduardo Zamora, Antonio Tabasco & David de la Fuente (GMV), Natalie Garrett & Michael Sanderson (MetOffice) Marta Terrado (BSC) Chiara Monotti (BARILLA) Antonio Graça & Marta Teixeira (SOGRAPE) Alessandro Dell'Aquila, Luigi Ponti & Sandro Calmanti (ENEA) Massimiliano Pasqui (CNR)	
<b>Creation Date</b>	17/01/2018	
<b>Version Number</b>	2.1	
<b>Version Date</b>	30/05/2019	
<b>Deliverable Due Date</b>	31/05/2018	
<b>Actual Delivery Date</b>	31/05/2018	
<b>Nature of the Deliverable</b>	R	<i>R - Report</i> <i>P - Prototype</i> <i>D - Demonstrator</i> <i>O - Other</i>
<b>Dissemination Level/ Audience</b>	PU	<i>PU - Public</i> <i>PP - Restricted to other programme participants, including the Commission services</i> <i>RE - Restricted to a group specified by the consortium, including the Commission services</i> <i>CO - Confidential, only for members of the consortium, including the Commission services</i>

## REVISION HISTORY LOG

Version	Date	Created / Modified by	Pages	Comments
1.1	12-03-2018	SOGRAPE	26	Minor changes
1.2	14-03-2018	BSC	26	Comments and suggestions
1.3	20-03-2018	MetOffice	26	Comments and suggestions
1.4	21-03-2018	Barilla	26	Minor changes
1.5	10-04-2018	GMV	27	Minor changes
1.6	22-05-2018	CNR, UTH	27	Minor changes
1.7	23-05-2018	GMV	27	Minor changes
1.8	30-05-2018	GMV	29	Minor changes
1.9	31-05-2018	ENEA	30	Minor changes
2.0	31-05-2018	GMV	31	Final document
2.1	30-05-2019	GMV	37	Update version including additional KPIs and mentions to the quality plan Social media guidelines suggested by MetOffice IPR issues update by CNR

### Disclaimer

The information, documentation, tables and figures in this deliverable are written by the MED-GOLD project consortium under EC grant agreement 776467 and do not necessarily reflect the views of the European Commission. The European Commission is not liable for any use that may be made of the information contained herein

## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	7
1. INTRODUCTION .....	8
1.1. PURPOSE .....	8
1.2. SCOPE .....	8
1.3. DEFINITIONS AND ACRONYMS .....	9
1.3.1. DEFINITIONS .....	9
1.3.2. ACRONYMS .....	9
2. REFERENCES.....	11
2.1. REFERENCE DOCUMENTS.....	11
3. MED-GOLD SUMMARY.....	12
4. PROJECT PARTNERS.....	13
5. PRINCIPLES OF COMMUNICATION, DISSEMINATION AND EXPLOITATION PLAN .....	14
6. COMMUNICATION AND DISSEMINATION MANAGEMENT .....	16
6.1. EXTERNAL COMMUNICATION AND DISSEMINATION.....	16
6.2. INTERNAL COMMUNICATION AND DISSEMINATION.....	17
6.3. COMMUNICATION IN CASE OF CRISIS .....	17
6.4. COMMUNICATION AND DISSEMINATION MATERIALS.....	18
7. TARGET AUDIENCES CHARACTERISTICS .....	20
8. COMMUNICATION AND DISSEMINATION CHANNELS .....	22
9. KNOWLEDGE MANAGEMENT AND PROTECTION .....	24
10. INNOVATION MANAGEMENT.....	27
11. QUALITY MANAGEMENT .....	29
12. MONITORING AND EVALUATION .....	31
ANNEX A.    MED-GOLD TEMPLATE .....	33
ANNEX B.    SOCIAL MEDIA GUIDELINES .....	34
ANNEX C.    IMPACT ACTIVITY EVALUATION REPORT .....	36

## LIST OF TABLES AND FIGURES

Table 1-1 Definitions.....	9
Table 1-2 Acronyms .....	9
Table 2-1 Reference Documents .....	11
Table 4-1 List of MED-GOLD partners .....	13
Table 5-1 Key messages to be conveyed.....	14
Table 6-1 Relation of communication and dissemination functions. ....	16
Table 6-2 Content development key contact.....	17
Table 6-3 Language key contact.....	19
Table 7-1 Target audiences for MED-GOLD project .....	20
Table 7-2 Dissemination tools and actions for each target group .....	20
Table 8-1 Channel supervisor.....	23
Table 9-1 List of exploitable results .....	24
Table 9-2 Exploitation result expectations by each partner .....	24
Table 10-1 Readiness Level of Key Technology Components .....	28
Table 11-1 Key Performance Indicators for quantitative and qualitative assessment .....	31
Table B-1 Selected relevant hashtags for use on Twitter .....	35
Figure 6-1 Communication and dissemination flowchart. ....	16
Figure A-1 Template images .....	33
Figure C-1 Impact activity evaluation sheet.....	36

## EXECUTIVE SUMMARY

This deliverable sets a comprehensive and communal strategy on communication, dissemination and exploitation of the MED-GOLD project as a whole. This guideline will be followed throughout the project's life and integrated in all the work packages.

It defines and prioritises the key communication, dissemination and exploitation objectives, especially for the three prototype pilot climate service applications that are going to be co-designed and developed under the project framework. Also, in order to assure a successful dissemination and stakeholder engagement, it identifies the main target groups and the messages to reach them.

The monitoring procedures are also defined. Nevertheless, this plan will be updated on annual basis based on the project progress and monitor results to maximize its impact.

With this deliverable, the project has contributed to the achievement of the following objectives (GA, Part B Table1.1):

No.	Objective	Yes
1	To co-design, co-develop, test, and assess the added value of proof-of-concept climate services for olive, grape, and durum wheat	
2	To refine, validate, and upscale the three pilot climate services with the wider European and global user communities for olive, grape, and durum wheat	
3	To ensure replicability of MED-GOLD climate services in other crops/climates (e.g., coffee) and to establish links to policy making globally	
4	To implement a comprehensive communication and commercialization plan for MED-GOLD climate services to enhance market uptake	X
5	To build better informed and connected end-user communities for the global olive oil, wine, and pasta food systems and related policy making	

## 1. INTRODUCTION

### 1.1. PURPOSE

This document defines the communal collaborative communication, dissemination and exploitation strategy for the MED-GOLD project. This plan is designed to provide the theoretical and operational framework for these activities in order to facilitate regular interactions within the project consortium and among other stakeholders as promoting the diffusion of the project concepts, results and demonstrators across the MED-GOLD community and the general public.

This requires synchronisation and alignment on strategic and operational levels through frequent, multi-directional exchanges in order to:

- Generate a common project image and recognizable identity, which promote the usefulness of climate services for supporting agricultural decision-making processes;
- Facilitate coherent, regular and continuous exchanges between the various activities to identify common interests across the different sectors and demonstrators;
- Share best practices and align horizontal issues among the three sectors involved in the project and other in which they can be replicated;
- Promote and ensure active communication and high visibility of the project and its results;
- Co-develop the demonstrators through continuous interaction and feedback from potential users at different scales;
- Communicate and promote opportunities for a wider stakeholder community, including end-users, IT service companies, SMEs, start-ups and developers in-line with the concept of climate services commercialization;
- Ensure a favourable reputation and competitive advantage of project outcomes;
- Ensure capacity building to transfer results and promote, implement and spread the use of the climate services through the MED-GOLD community;
- Ensure accessibility and open access of MED-GOLD project results;
- Guarantee an appropriate articulation within communication, dissemination and exploitation activities;
- Provide better information about the importance of climate services and their potential value.

### 1.2. SCOPE

Food production is an economic sector dependent on climate. Global climate change is causing new patterns in climate conditions over the world. Although the project is focused on three relevant Mediterranean crops (olive, grapes and durum wheat), the research and technological approach established in MED-GOLD are transdisciplinary and of interest to other agricultural sectors and geographical regions (one area already included in MED-GOLD is Colombia, where climate services for coffee crops will be developed). In fact, one of the project's expected outputs is a study of its replicability on new potential markets since the major concern in food production is nowadays to optimize performance, maximize yields and quality, while minimizing environmental impact through better informed strategies such as those that climate services can provide.

Moreover, in order to develop a successful climate service, Brasseur and Gallardo (2016)<sup>1</sup> indicated that:

- It should be user-centric;
- Supported by active research;
- Provide advance information on a variety of space and time scales;
- Have active stewardship;
- Have active and well-defined participation of government, business, organized civil society and academia;

Considering these issues, a translation to the MED-GOLD project in terms of communication, dissemination and exploitation entails:

<sup>1</sup> Brasseur, G.P. and Gallardo, L. (2016). Climate Services: Lessons learned and future prospects. *Earth's Future*, 4, 78-89.





- Development of adapted and customized climate services for each of the three Mediterranean crops that involve the participating sectors;
- Transfer and translate current scientific knowledge to innovative, practical and useful tools;
- Stimulate collaboration with other scientific, industrial and civil society initiatives related to climate-agriculture binomial;
- Make the general public and institutions aware of the vulnerability of agriculture to climate change and the knowledge and technologies available to face it;

## 1.3. DEFINITIONS AND ACRONYMS

### 1.3.1. DEFINITIONS

Concepts and terms used in this document and needing a definition are included in the following table:

**Table 1-1 Definitions**

Concept / Term	Definition
Climate Service	Timely production and delivery (translation and transfer) in customized products (projections, forecasts, information, trends, economic analysis, assessments, etc.) of useful climate-related data, information and knowledge that support adaptation, mitigation and disaster risk management to decision makers
Communication	Strategic and targeted measures for promoting the results to a multitude of audiences
Dissemination	Public disclosure of the results by an appropriate communication channel.
Exploitation	Use of the results during and after the project's implementation. It can be for commercial purposes, improving policies and tackling economic and societal problems.
End-user	Organization or person who ultimately uses or is intended to ultimately use a product or service
Key Performance Indicators	Measureable value that demonstrates the effectiveness of an activity
Plan	Detailed proposal or scheme agreed within parts of acting, doing, proceeding and/or making.
Result	Tangible or intangible output (data, knowledge or information)
User	Organization or person who support, maintain, procure, authorize or pay a product or service

### 1.3.2. ACRONYMS

Acronyms used in this document and needing a definition are included in the following table:

**Table 1-2 Acronyms**

Acronym	Definition
CC	Creative Commons
DMP	Data Management Plan
EIP-AGRI	Agricultural European Innovation Partnership
EO	Earth Observation
EU	European Union
EUPL	European Union Public Licence
GA	Grant Agreement
GNP	General Public Licence
ICT	Information and Communication Technologies
IT	Information Technology
IP	Intellectual Property
IPR	Intellectual Property Rights
MGs	MED-GOLD partners
KPI	Key Performance Indicators
SMEs	Small and medium-sized enterprises
TPs	Third Parties
TRL	Technology Readiness Level





Acronym	Definition
WP	Work Package
QAM	Quality Assurance Manager



## 2. REFERENCES

### 2.1. REFERENCE DOCUMENTS

The following documents, although not part of this document, amplify or clarify its contents. Reference documents are those not applicable and referenced within this document. They are referenced in this document in the form [RD.x]:

**Table 2-1 Reference Documents**

Ref.	Title	Date
[RD.1]	Graphical MED-GOLD Identity Guideline	10-02-2019
[RD.2]	MED-GOLD Grant Agreement	16-10-2017
[RD.3]	Data Management Plan	31-05-2018
[RD.4]	Quality Plan	23-04-2017

### 3. MED-GOLD SUMMARY

MED-GOLD will demonstrate the proof-of-concept on how climate services can make European agriculture and food systems more competitive, resilient and efficient since they can minimize climate-driven risks/costs and seize opportunities for added-value. One of the first achievements of the project is to have gathered under its framework all the main actors that can show the real usefulness of climate services. Here, actors include public agencies, academia, IT services and producers.

Three case studies, grapes, olives and durum wheat, with a high relevance from the ecological and cultural point of view in the Mediterranean food system, but also on the global market, will be addressed to co-design climate services that show a new paradigm of climate informed decision-making processes within the agri-food chain. In addition, services will be developed for the coffee-growing sector within Colombia.

End-users and suppliers are involved in the co-design processes for developing three prototype pilot climate service applications, tailored to each sector. These services will demonstrate the added-value of climate data/information for better informed systems in order to optimize the overall performance of the olive, grape and durum wheat sectors in the Mediterranean basin, especially in Italy, Spain and Portugal where the partners are located.

These tailored climate services will, therefore, show the usefulness of joining applied research on crop modelling and climate change with new technologies on Earth Observation (EO) and its implications. Moreover, a co-design strategy among academia, services providers and end-users establish an innovative way for tool development and user capacity building that enables a more adequate strategy for business implementation and replicability in the concerned sectors and regions but also in others.



## 4. PROJECT PARTNERS

List of participants involved in the project which must follow the plan detailed in this document:

**Table 4-1 List of MED-GOLD partners**

Acronym	Name	Type	Country	Description
ENEA	Agenzia Nazionale per le Nuove Tecnologie, l'energia, e lo sviluppo economico sostenibile	Public Agency	Italy	Research and diffuse activities related to environmental surveys and monitoring
Barilla	Barilla G. & R. Fratelli S.p.A.	Food company (Durum wheat sector)	Italy	Producer of pasta meals, sauces and bakery products
Beetobit	Beetobit	IT services	Italy	Focus on building scalable modern computing platforms
BSC	Barcelona Supercomputing Center	IT services	Spain	Research, develop and manage information technologies in order to facilitate scientific progress.
CNR	National Research Council of Italy	Public Research Institution	Italy	Promote innovation and competitiveness of the Italian industrial system and internationalization of the Italian research system. Advice government and other public bodies.
DCOOP	DCOOP S.C.A.	Food company (olive sector)	Spain	Second-degree cooperative for olive oil, table olives, wine and livestock production
EC2CE	EC2CE	IT services company	Spain	Development of decision tools for the agricultural sector based on artificial intelligence predictive models.
GMV	GMV Aerospace and Defence S.A.U.	IT services company	Spain	Technology multinational industrial group which provides cut-of-the-edge innovation for the citizens' benefits
HORTA	HORTA S.R.L.	IT services company	Italy	Research through the transfer of technological innovation to practical agriculture by developing new cropping strategies, methods and products.
JRC	The Joint Research Centre	Public Research Institution	Italy	In-house science service of the European Commission. Provides scientific and technical support throughout the whole policy cycle.
MetOffice	Met Office	Public Agency	United kingdom	UK's national weather service to provide weather and climate-related services to the Armed Forces, government, departments, the public, civil aviation, shipping, industry, agriculture and commerce.
NOA	The National Observatory of Athens	Public Research Institution	Greece	Basic and applied research on terrestrial interior, atmospheric environment and space.
SOGRAPE	Sogrape Vinhos S.A.	Food company (wine sector)	Portugal	Group of companies and brands which produces wines in Portugal, Spain, Argentina, Chile and New Zealand.
UMNG	Universidad Militar Nueva Granada	Public Research Institution	Colombia	Extensive experience in research and teaching on different areas such as sciences applied to agricultural systems.
UNIVLEEDS	University of Leeds	Public Research Institution	United Kingdom	Research-intensive university with world class center of excellence that includes cross-cutting work on climate change and related topics.
UTH	University of Thessaly	Public Research Institution	Greece	Well-known institute for higher education on information technologies topics

Linked third parties participating in the project such as the Council for Agricultural Research and Economics (CREA) must also take into consideration this plan and its guidelines and recommendations.

## 5. PRINCIPLES OF COMMUNICATION, DISSEMINATION AND EXPLOITATION PLAN

This plan sets the stage, but those involved in the project are the ones who must take responsibility for its fulfilment, something that everyone benefits from.

The communication style is linked to what is "said" to be truly understood and accepted. By identifying the adequate communication style, a more effective communication can be done. There are a number of categories, characterized by different sorts of behaviour and language:

- Passive: the goal of this style is to avoid conflict and not express one's opinion. It implies, therefore, losing control of communication.
- Aggressive: related to try to protect one's ideas and opinions. Unidirectional style characterized by trying to impose ideas and messages.
- Passive-aggressive: trying to avoid obvious conflict, but there is still a need to manipulate the situation. In many cases, there is some sort of "payback" given in return for having their opinions overlooked.
- Submissive: pleasing other people and avoiding conflict.
- Assertive: is born of high self-esteem. It is the healthiest and most effective style of communication since it has the confidence to communicate without resorting to games of manipulation. Bidirectional communication adapted to the context. It transmits the messages but without imposition, accepting comments and external ideas.

The MED-GOLD project must be based on an assertive communication style. Since one of the objectives of this plan is to ensure maximum awareness, information and participation of stakeholders in the prototype pilot services, especially in assessing, validating and exploiting the added value to the users; thus, getting a real feedback is appropriate and necessary. In this sense, the next points must be taken into account:

- Simplicity: precise and direct language, adapted to each channel and target audience;
- Coherence: coherent with the objectives of the project;
- Avoid propaganda and false expectations: it is important for the audience to trust the information transmitted; therefore, communicate clearly what is or is not possible, expose verifiable facts and avoid the disclosure of speculation.
- Avoid saturation of messages and actions: the objective is not to launch many messages, but about to do it strategically, at the right time and with specific content.

As all the participants must be aware of the communication style, the project messages must be known, understood, assumed and used by all partners. In this way, by establishing what is said and how it should be said, coherence and unification can be achieved.

**Table 5-1 Key messages to be conveyed**

Communication Aim	Message	Actions
Awareness	Potential of climate services to address the risks of climate change on agriculture production and bring new opportunities in agricultural climate adaptation	Information on saving costs and reducing environmental impact through better-informed agricultural decision making systems
Engagement	Quality and relevance of climate services for both short and long term decision making	End-user success experiences Open access to demonstrators and experience reports, guidelines or lessons learned Expansion of project results into global networks and its replicability in other sectors Contribution to standards on quality of climate services
Adoption	Added value of climate services	Open access to pilot climate service applications Capacity building for end-users through training sessions Contribution to standards on quality of climate services Policy-making recommendations.

The prototype pilot climate service applications to be developed under the MED-GOLD framework are the best opportunity for fulfilling the potential and capacity to exploit the results of the projects and also capitalize on the knowledge and experience gained from other Copernicus climate services projects and contracts. Nevertheless, these



activities must be carried out during the project's life and not only at the end when the services are developed. Open access platforms for sharing results and getting real feedback from end-users who can assess the potential and benefits from different points of view (input-cost savings, reduced environmental impact, etc.) or/and intermediate actors that can commercialize further products based on the project results help to transfer research, innovation and technology into the socio-economic field and generate additional incomes.

An Intellectual Property Ownership framework, which allow the partners of MED-GOLD to exploit the results of the project beyond its duration, is defined on the Grant Agreement [RD.2]. Based on that, it may be noted that MED-GOLD is based on an open innovation project with external and internal management and use of intellectual property rights in order to have a successful result based on in-depth understanding of end-users, requirements, operations and system and engaging in more directed problem-solving activities.

Furthermore the MED-GOLD project team defined a number of categories to fruitfully manage the complex mechanism of exchanging of data and information both internally and externally with respect to the project. These labels: raw data; processed data; generated data; personal data; qualitative data (collected during workshops), publications; these six categories are discussed in more detail below. A reference scheme has been established for any publication and documentation used or produced in the MED-GOLD project along with the sharing rules adopted for brand new objects/products such as computed datasets, communication elements, software. A detailed description is provided by the Data Management Plan. The following scheme summarized these rules:

<i>Objects Generated by Med-GOLD</i>	<i>Access Type</i>	<i>Reference Licence Scheme Solution</i>
	<b>MGs</b>	<i>Med-Gold Grant and Consortium Agreements</i>
<b>DATASETS</b>	<b>TPs</b>	<i>Med-Gold Grant and Consortium Agreements</i>
	<b>Private</b>	<i>Restricted access managed by specific rules</i>
	<b>Public</b>	<i>Creative Commons Licence scheme (CC BY, CC SA or CC ND)</i>
	<b>MGs</b>	<i>Med-Gold Grant and Consortium Agreements</i>
<b>COMMUNICATION PRODUCTS</b>	<b>TPs</b>	<i>Med-Gold Grant and Consortium Agreements</i>
	<b>Public</b>	<i>Creative Commons Licence scheme (CC BY, CC SA or CC ND)</i>
	<b>MGs</b>	<i>Med-Gold Grant Agreement</i>
<b>SOFTWARE, SCRIPT, LIBRARY, PACKAGE</b>	<b>TPs</b>	<i>Med-Gold Grant Agreement</i>
	<b>Private</b>	<i>Non open source code with a restricted access managed by specific rules</i>
	<b>Public</b>	<i>Open source schemes (such as GNU General Public Licence, European Union Public Licence, ect)</i>

Table: Access Type and Licence Schemes where Med-Gold Partners (MGs ),Third Parties (TPs), Everyone (Public).

As a general rule public dataset used as input information for algorithms, models and estimates, will remain public, following the initial licence scheme; the same approach will be adopted for open source software. For each element, data or information, it will be identified a responsible person who will be in charge to act as a reference point for project partners, and to check if all the additional information, licences scheme included, are properly provided. To upload brand new elements, both data and information in the MED-GOLD platform it would be asked to identify a sharing rule. At the end of the project sharing policy of data, software and information generated in the framework of MED-GOLD will be specifically decided and identified in order to guarantee a final sharing rule.

## 6. COMMUNICATION AND DISSEMINATION MANAGEMENT

The plan should seek to raise awareness among the potential and general audience of the project, by informing, although not in detail, of the objectives, activities and outcomes. Additionally, all partners should be aware of the on-going activities and there should be continuous interaction. Updating this plan according to the progress and emerging results of the project will be considered in the event of changes in stakeholders, working context and potential use of the results.

### 6.1. EXTERNAL COMMUNICATION AND DISSEMINATION

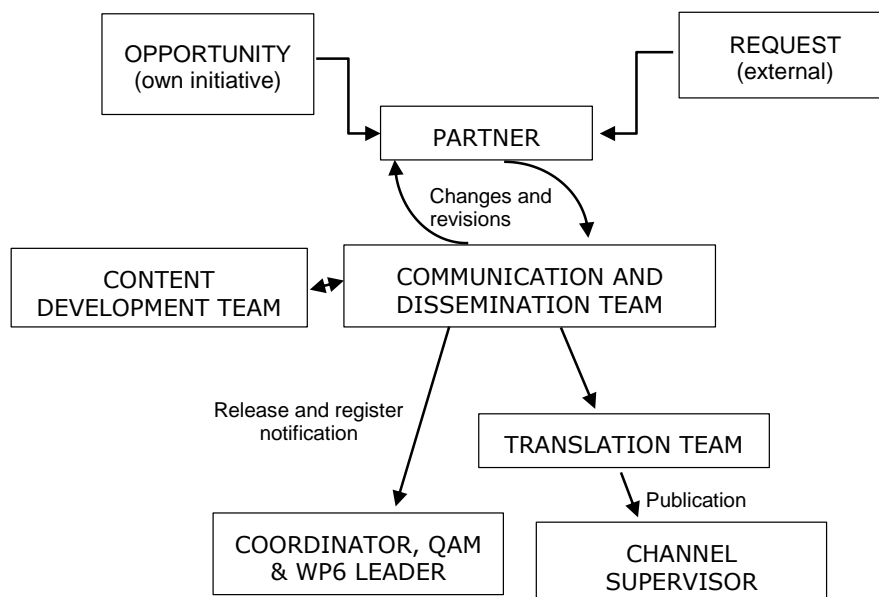
External dissemination and communication refer to all activities intended to transmit the project developments and results to external audiences, that is, to general public or specific sectors and administrations.

Maximum communication responsibility falls under the coordinator project, ENEA, and will be supported by the quality assurance manager (UTH) and the communication, dissemination and exploitation team, involved in work package number 6, led by GMV, although all partners must intervene in an aligned manner. Moreover, a climate service expertise panel for each sector will be identified in the consortium to promote and evaluate potential communications and dissemination activities. Table 6-1 summarizes the different tasks or functions:

**Table 6-1 Relation of communication and dissemination functions.**

Coordinator & QAM	Communication, dissemination and exploitation support team	Rest of partners
Resolve any conflict at external or internal level. Evaluation of communication and dissemination opportunities. Communication tools management (activation, update and diffusion). Internal audits for quality assurance.	Support the coordinator in communication matters. Ensure plan compliance. Detect communication and dissemination opportunities. Monitoring dissemination and communication actions. Report dissemination and communication activities  Two subgroups are under this structure: <ul style="list-style-type: none"> <li>- Content development team: check content and promote-integrate synergies within WP to highlight project overall results.</li> <li>- Translation development team: responsible for the internal translation of local project language of the communication materials.</li> </ul>	Detect communication and dissemination opportunities. Support dissemination and communication activities. Comply with plan requirements.

The external communication and dissemination strategy must follow the next scheme, either on own initiative of a partner or based on an external request (interview, demonstration, congress participation, etc.):



**Figure 6-1 Communication and dissemination flowchart.**



Basically, a specific partner will be responsible for the design and development (alone or with the collaboration of other partners) of a communication and dissemination material. Then, a general revision will be performed by the communication and dissemination team - concretely, the content development group (Table 6-2) - , in order to incorporate and integrate overall project dimension. Moreover, this team will also promote the development of other materials to achieve the project objectives. Based on the target audience and dimension of the material, it may be of particular relevance to translate it by the translation team (Table 6-3) to one or several local project language in order to have a higher impact. Finally, a notification of release and register on the C&D activities table of the MED-GOLD project will be send to ENEA and GMV. Publication will be the responsibility of the channel that will be used for communication and dissemination based on Table 8-1.

**Table 6-2 Content development key contact.**

Partner	Key contact
ENEA	Coordination team
Barilla	Chiara Monotti
Beetobit	Federico Caboni
BSC	Marta Terrado
CNR	Massimiliano Pasqui
DCOOP	Javier López
EC2CE	Ricardo Arjona
GMV	Eduardo Zamora
HORTA	Valentina Manstretta
JRC	Andrea Toreti
MetOffice	Michael Sanderson
NOA	Christos Giannakopoulos
SOGRAPE	Marta Teixeira
UMNG	José Ricardo Cure
UNIVLEEDS	Marta Bruno Soares
UTH	Dadoukis Aris

It should be noted that for certain communication and dissemination materials which can be considered of particular relevance, the Quality Plan [RD.4] peer-reviewed procedure must be followed before publishing.

Particular attention is pointed in dissemination events (i.e. journal publications, participation in conferences, expo or demos or public events) since MED-GOLD Quality Plan has establish a specific procedure for scheduling and reporting.

There are approved general project documents for external communication and dissemination that don't require to follow this flowchart and they can be user directly by any partner.

Unless it goes against their legitimate interests, each partner must — as soon as possible — disseminate its results by disclosing them to the public by appropriate means. Nevertheless, the conditions set on the Grant Agreement [RD.2] must be fulfilled in order to respect legitimate interests in relation to the results or background contributions of other partners.

## 6.2. INTERNAL COMMUNICATION AND DISSEMINATION

Internal communication measures aim to establish a continuous flow of information at different levels to promote an interconnectivity within partners, minimizing possible conflicts caused by lack of communication.

Each organization must designate two key persons involved in the project that will be aware of any issue related to the project. These key contacts will be responsible for redistributing it in their organization.

In section 8, the tools made available in the project such as email or intranet are specified.

## 6.3. COMMUNICATION IN CASE OF CRISIS

Crisis is defined as an unexpected and adverse situation that directly affects the project reputation and requires an immediate response. Examples of assumptions that can cause a crisis:

- Relevant changes in the organization of any of the partners that directly affect their role in the project.
- Conflicts arising from the misuse of corporate identity or inadequate execution of any of the actions included in the project



- Conflicts between partners that are made public.
- Conflicts with some of the stakeholders sectors.
- Continued discrediting of the project and / or the role of one of its partners in the media and/or networks.
- Any other event that may affect the image of the project and that cannot be resolved routinely.

If the preventive recommendations exposed above do not work, in order to solve this situation is required a predetermined strategy based on a direct communication as soon as the risk is identified with the Coordinator. This will assess the case and establish the appropriate measures.

## 6.4. COMMUNICATION AND DISSEMINATION MATERIALS

All the partners are involved in the preparation of these materials; thus, it is required to establish different guidelines before its realization and edition:

1. Unless the Agency requests or agrees otherwise or unless it is impossible, any dissemination of results (in any form, including electronic) must: (a) display the EU emblem, (b) include the following text: "This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 776467" and (c) include all partners' logo.
2. There is a graphical MED-GOLD Identity Guideline (RD.1) with the basic rules for standardizing the visual identity of the project such as MED-GOLD logo, project colours or partner logos.
3. Preferably, electronic edition will be chosen. Only, to reach a specific audience, a printed edition will be used and always in an adequate number.

The Quality Plan [RD.4] defines the format and style that each document must fulfil. Also, it is specified the internal peer-reviewed procedure of any communication and dissemination project material. Deliverables must follow the template available (annex A). Specific details are described on section 12 of this document.

Based on the initial agreement between partners, there are a number of initial expected materials for communication and dissemination in order to reach all target audiences. The list of materials agreed at this stage of the project, although it may be subject to changed and additions are:

- Infosheets: at least 6 short informative documents about different MED-GOLD topics such as:
  - Climate predictions for the grape sector
  - Climate predictions or the olive sector
  - Climate predictions for the durum wheat sector
  - The time horizons of climate forecasts
  - Reliability of climate predictions
- Press/News releases: at least 6 about MED-GOLD advances in the three sectors (kick-off, workshops/focus group progress, user engagement experience, etc).
- Webinars: at least 3 webinars will be organized concerning specific topics or related-sector issues. The proposed topics which will be leaded by BSC are:
  - Understanding user needs for the co-production of climate services (2018);
  - Different approaches for climate services in agriculture – experience from other projects (2019);
  - Showcasing climate services for agricultures: olive, grape and durum wheat (2020);
  - Good practices and lessons learned during the development of the MED-GOLD climate services. Potential upscaling to other sectors (2021);
- Journalistic articles or interviews: at least 4 (one per year) will be performed to MED-GOLD coordinators (ENEA) industrial partners (SOGRAPPE / DCOOP / Barilla) and advisory board member to show the potential importance of having proofs-of concept for climate services or reflection of MED-GOLD advances.
- Newsletters: to inform the stakeholders about project results. Twice newsletters per year will be prepared and disseminated. This work will be leaded by BSC.
- International publications: achieved scientific results will be published in leading peer-reviewed scientific Open Access Journals.
- Policy briefing: the proposed ones for 2020-2021 and leaded by BSC are:
  - Vulnerabilities and opportunities of the Mediterranean food system. The role of climate observations and climate predictions and projections in olive, grape and durum wheat;
  - Climate services for olive, grape and durum wheat ;
  - Replicability of MED-GOLD climate services on new potential markets.



MED-GOLD is a project focus on three Mediterranean sectors which can be identified with three well-known industrial partners with a strong territorial link to Spain, Italy and Portugal. This implies that apart from English, the native languages of these countries are relevant for the project and, especially for the stakeholder engagement. In this sense, MED-GOLD has established an internal process for translation to Spanish, Italian, Portuguese and Greek the most relevant materials that are going to be produced under the project scope. Basically, the material is originally written in English and disseminated to the partner's language key contacts (Table 6-3) to be translated.

**Table 6-3 Language key contact.**

Partner	Key contact	Language
ENEA	Sandro Calmanti	Italian
Barilla	Chiara Monotti	Italian
Beetobit	Federico Caboni	Italian
BSC	Marta Terrado	Spanish
CNR	Massimiliano Pasqui	Italian
DCOOP	Javier López	Spanish
EC2CE	Ricardo Arjona	Spanish
GMV	Eduardo Zamora	Spanish
HORTA	Valentina Manstretta	Italian
JRC	Andrea Toreti	Italian
MetOffice	Michael Sanderson	English
NOA	Anna Karali	Greek
SOGRAPE	Marta Teixeira	Portuguese
UMNG	José Ricardo Cure	Spanish
UNIVLEEDS	Elena Mihailescu	French
UTH	Dadoukis Aris	Greek

## 7. TARGET AUDIENCES CHARACTERISTICS

An innovative dissemination and exploitation approach is set in MED-GOLD, which is different from traditional top-down strategies in which the scientific community reports their findings through publications which have little impact on societal actors. Co-design and co-generation of knowledge among different actors, such as the scientific community, information providers and prospective-potential users can narrow the gap to make climate services useful. This is the approach followed by the project and actors that are part of it in order to address known climate services challenges.

**Table 7-1 Target audiences for MED-GOLD project**

Stakeholder type	Actors	Requirements or interests
Upper level	Scientific and technical community or networks (EIP-AGRI, innovation hubs related to farming, operational groups on agroecosystems, climatology, ICT) Public agencies and authorities Investments banks Assurance companies NGOs	Long-term trends Regional scale Service expectation: additional financial, economic or social risks information
Intermediate Level	Climate service providers and purveyors Information providers (IT services, Space application services...) Environmental-agriculture consultancy and advisory service companies Engineering firms Nongovernmental organizations Sectorial organizations or associations	Service expectation: collect data and make accessible available observations and models Advisory business
End-user level	Large-scale producers Local professional organizations Small agricultural business Farmers	Short term scenarios Local or farm scale Advisory business Service expectations: tailored solutions to deal with data, models, projections and uncertainties. Capacity building through ad-hoc and top-down training activities. Interest in knowing end-users success stories
Transversal	General public	Global scale Understanding impact and vulnerability of global climate change and climate conditions on agriculture and mitigation actions such as the usefulness of climate services

The above groups can help define the appropriate dissemination tools and actions, the key messages to convey and finally the potential benefits. Table 7-2 synthesizes the different aspects that need to be considered during the project to achieve the objectives through a close, open and proactive communication:

**Table 7-2 Dissemination tools and actions for each target group**

Stakeholder type	Dissemination tool/Action	Objective	Key message	Potential benefit
Upper level	Publications (including scientific articles, infosheets, project deliverables, etc.) Science-based policy briefings Training sessions	Advance on climate services applications	New technologies and advances on climate services have direct impact on real short term and long term activities	Innovate on crop modelling and climate projections Advance on the current knowledge and usefulness of climate services Implement new strategies to model risks Implement climate adaptation measures

Stakeholder type	Dissemination tool/Action	Objective	Key message	Potential benefit
Intermediate Level	Publications (including scientific articles, infosheets, project deliverables, etc.) Newsletters Webinars Training sessions	Improve usefulness of current business models on climate services Direct Interconnection within knowledge and applicability	Supporting agriculture with new tools and technologies based on climate services can generate economic benefits	Identify new business opportunities Business model adaptation to market requirements.
End-user level	Publications (including scientific articles, infosheets, project deliverables, etc.) Training sessions Webinars Press releases Journalistic articles Newsletters ICT platform	Open new opportunities Involve them actively in the project Obtain a feedback of knowledge and experiences	Climate services increase agriculture profitability	Identify new business opportunities Improve in-house expertise on climate information Potential direct beneficiaries of the project pilot
General public	Press releases Journalistic articles Newsletters	General knowledge of the project	Agriculture is vulnerable to climate change	Better informed society about the vulnerability of agriculture to future climate change

One aspect that can help in the communication and dissemination strategy is a phrase that, in a summarized and direct way, expresses the communication intention of the project. It must be simple and easy to remember by the public, allowing a fast identification. The selected motto for the project is “surfing the climate. This motto will be used in all actions and should always be accompanied by the projects’ logo under the graphical identity criteria.

This phrase transmits, in a direct and simple way, a fundamental concept: facing and adapting climate conditions, new management strategies based on climate services and guarantee environmental and economic sustainability.

Timescale is a challenge for the communication between the climate community and many stakeholders. Moreover, stakeholders can be grouped into two: those directly related to the crops studied in MED-GOLD and those related to other crops and even sectors of the bioeconomy market (forestry, livestock, fisheries...) and therefore, the general message of the project should go through all of them.

One relevant aspect of MED-GOLD is that, although the project focuses on three Mediterranean sectors (olive, grape and durum wheat) and develops a community of stakeholders directly linked to the pilot services for engaging, validating and exploiting them, a wider perspective should be considered in order to engage other sectors, such as coffee, forestry, livestock, etc.

Overall, this plan will contribute to develop improved communication methods to overcome the barrier of a general lack of awareness about the relevance of climate services and the potential value in the agricultural sector.

## 8. COMMUNICATION AND DISSEMINATION CHANNELS

Depending on the target audience and objectives one channel or another may be more appropriate. This section synthesizes the different tools available:

- Channels:

- Webpage: public deliverables, publications and science-based policy briefings will be made available on this webpage for downloads, news will be published, workshops and webinars will be announced. A subscription register will be available through the web.

Link: <https://www.med-gold.eu>

- Social networks (twitter): for the dissemination of results, summaries and, moreover, the live report of events like the main assemblies or the most important events. A detailed social network strategy is described on Annex B.

Link: [https://twitter.com/medgold\\_h2020/](https://twitter.com/medgold_h2020/) (@medgold\_h2020)

- Email: a subscription register form will be available through the web to those that want to receive newsletter, reports and project updates through this channel. This will compile in a mailing list.
- Workshops for user engagement, training, capacity building and project dissemination of specific topics or related-sector issues. (at least 6 workshops are planned for professional profiles (2 per sector; initial scoping at the beginning of the project and added value of the pilot services at the end of the project plus 1 workshop for dissemination and sharing of the project's results and end-users success stories).
- Online forum for bidirectional communication (interaction and feedback) within partners, stakeholders and MED-GOLD Community.
- Summer training sessions: public lectures and demonstrations given by technical personnel of the project for providing the audience theoretical and practical demonstrations (2 summer training are planned). Dissemination and capacity building materials will be developed.
- Open data public repositories for produced dataset sharing.
- Sectoral exhibitions and related EU events for increasing attention to the exploitable results and strengthen and intensify the relationship with the stakeholders' community.

- Internal channels:

- Email and mailing lists:

Coordinator email: [med-gold.project@enea.it](mailto:med-gold.project@enea.it)

Executive board: [med-gold.project.exec\\_list@enea.it](mailto:med-gold.project.exec_list@enea.it)

Scientific members of the consortium: [med-gold.project.science\\_list@enea.it](mailto:med-gold.project.science_list@enea.it)

Administrative members of the consortium: [med-gold.project.admin\\_list@enea.it](mailto:med-gold.project.admin_list@enea.it)

- Intranet platform based on the collaboration tool "Phabicator" to facilitate the work-flow and documentation sharing between MED-GOLD partners.

Link: <https://start.med-gold.eu>

- Communication space based on the tool "slack" for group working

Link: <https://medgold-eu.slack.com>

- "MED-GOLD Gazette" is an internal blog where the relevant events in the life of the project will be summarised to help all the participants to stay on the trail.

Link: <https://start.med-gold.eu/phame/blog/view/2/>

- Meetings: virtual or physical for the coordination of different activities

Meeting	General Assembly	Full Executive Board	Executive Board interim-update	WP team
Modality	Physical	Virtual	Virtual	Virtual
Frequency	Annually	Three-monthly	Monthly	Monthly

Virtual meeting room: <https://connect.portici.enea.it/med-gold>



Each channel will be under the supervision of a partner. Table 8-1 is an initial scheme that may be periodically reviewed under the MED-GOLD consortium:

**Table 8-1 Channel supervisor**

Channel	Supervisor
Website	ENEA
Social networks	GMV
email	ENEA
Workshops	ENEA
Forum	Beetobit
Training sessions	ENEA
Data repositories	CNR
Events	ENEA

## 9. KNOWLEDGE MANAGEMENT AND PROTECTION

The exploitation plan ensures that MED-GOLD results will create the opportunity to market innovative products and services, promote new research and support policy making.

The entire value chain of climate services in agriculture is represented in the MED-GOLD consortium. Companies in the three sectors (olives, grapes and durum wheat) will benefit from the project's innovations that support the planning of optimized climate risk management strategies. Service providers in the consortium will acquire new tools for their customers (WP2, WP3, WP4) and new opportunities for the development of Infrastructure as a Service (IaaS) will be created under MED-GOLD (WP1). The need for better informed policy making at EU level is also a target of MED-GOLD with a particular focus on the implementation of Sustainable Development Goals.

The list of expected exploitable results of MED-GOLD is presented below. Nevertheless, complementary outputs are also foreseen, especially once the key vulnerabilities, information needs and critical decisions of each sector are assessed on the initial stages of the project.

**Table 9-1 List of exploitable results**

Sector	Climate Services Description
Olive / olive oil	Olive fruit fly infestation models for short and long-term time scales Olive yield modelling approaches for seasonal and projections
Grapes / wine	Short and long term analysis of relevant climatic, bioclimatic and extreme climate indices affecting field management operations (choice of plantation site, grapevine variety, setting harvest dates, operational farming planning)
Durum wheat / pasta	Seasonal and long time-scale forecasting for yield, risk of diseases and operational farming management

In this plan is indicated how the consortium establishes the basis for the intellectual property strategy and exploitation activities, summarizing the general strategy related to the protection and exploitation of the project results. The exploitation of MED-GOLD outcomes by the different partners will be presented in detail in the annual dissemination and communication report (yearly updated) since at the project stage it is a preliminary list of potential exploitation activities that need to be updated and fine-tuned.

Exploitation (or use) of the project results have been agreed to do it through commercial exploitation activities and skills and knowledge transferring for transferring and policy making. Nevertheless, third parties not involved directly in the consortium can also exploitation the results (e.g. through licensing or by transferring the ownership of results under certain conditions). Partners' expectations regarding the results of MED-GOLD are shown in Table 9-2.

**Table 9-2 Exploitation result expectations by each partner**

Partner	Expectations	Type of exploitable project result	Sector	Target market
ENEA	Establish an exploitable network for climate services in key agricultural sector for Italy	Networking / Knowledge	Public	National (Italy)
BARILLA	Implement in their operational system the climate services developed for durum wheat Develop a business plan to promote the capitalization of the results and to facilitate the application of the developed technologies at farms, storage facilities and milling plants	Knowledge / Product-Service	Private	Local (Italy)
Beetobit	Developing and maintaining large-scale cloud infrastructure	Knowledge / Networking	Private	European / Global
BSC	Extend and implement new tools related to seasonal predictions and climatic indicators	Knowledge	Public / Private	European / Global
CNR	Improve methodologies to obtain high accuracy and robust data products for seasonal forecasts	Knowledge	Public	European / Global
DCOOP	Improve their advice services to farmers and cooperatives based on climate services	Knowledge / Product-Service	Private	Local (Spain)
ec2ce	Exploit climate services innovation in their activity	Knowledge / Product-Service	Private	European / Global
GMV	Extend and exploit climate services in other regions and sector based on project experience	Knowledge / Product-Service / Networking	Private	European / Global
JRC	Innovate on its agro-climatic modelling systems and provide more robust, reliable and consistent evidences for the agro-climatic policy support	Dissemination / Knowledge	Public	European / Global
Met Office	Increase knowledge on climatic and bioclimatic indicators	Networking / Knowledge	Public	European / Global







Partner	Expectations	Type of exploitable project result	Sector	Target market
NOA	Promotion of professional workshops for capacity building and participation on international conferences	Networking / Knowledge	Public	European / Global
SOGRAPE	Improve and develop climate services for its viticulture activity	Knowledge / Product-Service	Private	Local (Portugal)
UnivLeeds	Publications of peer-review articles and participation on international conferences	Dissemination	Public	European / Global
UTH	Capacity building of graduate and undergraduate studies in climate services and acquire practical experience	Knowledge / Dissemination / Networking	Public	Global

Since the exploitation interests of each partner are different and as it can be highlighted on the target audiences characteristics, the dissemination and exploitation of the project results for other regions and sectors will be replicated in a natural way.

An Intellectual Property Ownership framework is set in the Grant Agreement [RD.2] defining access rights, results ownership, joint ownership, transfer and protection of results. In that document each partner has identified their background brought into the project and agreed on the rules for IP. This will allow the partners of MED-GOLD to exploit the results of the project beyond its duration since the initial point of each one has been well-defined. In particular, new tools for the exploitation of public data stores and for the production of tailored information for the agricultural sector will be created in MED-GOLD. Each partner must take measures aiming to ensure exploitation of its results up to four years after the project.

Climate services should be freely accessible to any citizen, only specific requests or tailored solutions should be provided against retribution. In this sense, each partner must ensure open access (free online access for any user) to all peer-reviewed scientific-technical publications, data or results. Since the research results might require a peer review by the scientific community, [“gold” and/or “green” open access journals](#) will be used, being preferred the first option. This stimulated wider innovation and thus enriching society since individuals outside the consortium can benefit from MED-GOLD results.

The assessment of exploitation potential will enable to understand the related markets for the climate services and identify opportunities for exploitation, especially in the sector involved in this framework. Partners need to define specific activities for exploitation within the project consortium and with their potential customers and stakeholders outside the consortium. To allow the MED-GOLD community ensure that project results meet the real user needs, a forum for potential users who will request similar climate services for their own commercial and professional activities will be made available.

Nevertheless, several barriers and risks can occur during the project development that can affect this plan:

- Lack in the achievement of results;
- Poor usability of the tools developed in the project
- Problems with dissemination and communication activities;
- Weak engaging with the MED-GOLD community and other stakeholder for replicability of results;
- Conflict of interest among partners;
- Changes in the project objectives, consortium;
- Lack of oversight or poor project management;

The Grant Agreement [RD.2] and the Data Management Plan [RD.3] establish several conditions regarding intellectual property, responsibilities and access rights, which together with the ones exposed above should be used to manage these types of issues.

Data, software, script, library and documents are the main pillars for exchanging knowledge. Several elements need to be (re)defined in order to have clearly identification of each one:

Access (who can access)	MED-GOLD partners - MGs	Third parties (i.e. MED-GOLD stakeholder community that interacts with MG's partners) - TPs	Restricted access managed by specific rules - Private	Everyone - Public



License		
<b>License</b> (how can access)	Open-source licence schemes: Creative commons (CC) licencing scheme based on the combination of 4 features (BY NC ND SA) General Public License (GNU) European Union Public Licence (EUPL) – licence offering people the right to freely use and distribute software	Private: Non open source code or data with a restricted access managed by specific rules (Classic Proprietary Licence)

As it is described, different framework is set for input data (i.e. crop and climate data) and output data (i.e. model results for open science publication or private goods) based on access and license. MED-GOLD has a living document in which IPR and DMP issues are described ([link](#)). The table identifies the next fields: Name, Brief description, object (datasets, software, scripts, etc.), produced mainly by, date, access type (public, private, NGOs, TPs), licence scheme (GNU, EUPL, CC), notes, link, reference work package.

## 10. INNOVATION MANAGEMENT

Innovation is a core objective of MED-GOLD and specific care is dedicated to the management of the innovation process.

The key component of the innovation process in MED-GOLD is the adoption of a co-design approach which is aimed at improving the current practices through the exploitation of available technologies and data that have been made available through research activities in the broader field of climate science.

MED-GOLD aims at bringing incremental innovation in the field of climate services by the enhancement of current capabilities and competences and by the exploitation of existing technology. The identification and response to current needs is a fundamental aspect of the innovation project adopted in MED-GOLD which seeks to follow a rather predictable and consolidated process.

Therefore, the innovation management focuses mainly on the continuous monitoring and evaluation of the co-design process which is adopted for the development of the three prototypes. The co-design process is structured around the four phases:

**Phase 1:** Appraising needs and capabilities

**Phase 2:** Development of new tools

**Phase 3:** Testing

**Phase 4:** Assessment of added value

Phase 1 can be interpreted as broader brainstorming session, which is conducted through structured focus groups and through the continuous engagement of stakeholders (WP5).

Phase 2 and Phase 3 are conducted within the sectoral WP6 by expert teams in cooperation with a board of stakeholders that have been already engaged in an early stage of the project and that will continue to be grow throughout the project cycle (WP2, WP3, WP4).

Phase 4: is conducted within the sectoral WPs and provides all necessary information for the elaboration of a business plan (WP6), aimed at ensuring the longer term sustainability of the innovations developed during the project.

Specific **responsibilities** are, therefore, assigned to each phase of the innovation process, through the work of WP leaders involved in each phase of the project itself, in particular:

<b>Phase 1</b>	->	<b>WP5</b> stakeholders engagement
<b>Phase 2, Phase 3</b>	->	<b>WP2, WP3, WP4</b> developing and testing the new tools
<b>Phase 4</b>	->	<b>WP6</b> elaboration of a business model

The entire process is monitored by the Executive Board Meeting (EBM) of the project which meets regularly on:

- Monthly base, for updates on ongoing work and highlight of criticalities in the workflow, which are then handled separately as necessary
- Three-month base for checking the state of the innovation process and take common decisions as necessary.

In terms of the **Technology Readiness Levels** (TRLs) implied in MED-GOLD, the tools adopted in the three sectors range from TR2, where the concept and application has been formulated based on existing technology, to TRL4 where small scale, dedicated prototypes, have been developed in dedicated environments.

The aim of MED-GOLD is to bring the tools adopted in the project to TRLs between 5 and 7, as described in table 10-1.

**Table 10-1 Readiness Level of Key Technology Components**

Technology	Start TRL	Target TRL	Status Description
WOFOST	3	6	The WOFOST crop growth model is an open-source model implemented in several different languages and used by many institutions. Mean climatic conditions and drought are fully taken into account. While, a beta version modelling also the effect of heat stress has been recently developed by JRC. The effects of water excess have not been included yet.
Delphi	4	6	Delphi modelling system is a CNR-BARILLA proprietary software to perform yield and grain protein content forecasting as well as risk of pest and diseases
Agro-climatic indices	3	7	Several open-source softwares exist to derive relevant agro-climatic indicators. JRC has recently developed and implemented an R suite to derive indices linked to heat and water stress.
BSC R suite for assessment of seasonal forecast	4	6	BSC has developed the s2dverification R package ( <a href="http://cran.r-project.org/web/packages/s2dverification/index.html">http://cran.r-project.org/web/packages/s2dverification/index.html</a> ), which includes, among others, functions for data retrieval, bias adjustment techniques, deterministic and probabilistic verification measures, etc. BSC will implement new functions, as part of MED-GOLD, for obtaining several climatic indicators tailored to the Champions' needs. BSC aim at achieving TRL 6, where the technology will be demonstrated to be applied in a wine production environment.
CASAS Global physiologically based demographic models (CASAS-PBDMs)	3	6	The capacity for modeling a variety of tri-trophic agroecosystems in a general way using PBDM agro-ecosystem models including the olive/olive fly system (Gutierrez et al., 2009) and the coffee system (Rodríguez et al. 2011, 2013) will be implemented under the MED-GOLD project as a scalable modern computing platform in the form of an application as a service, as part of the MED-GOLD ICT platform. A roadmap for release as an open source package will be devised
MED-GOLD unified ICT platform for climate services	2	5	Validated technological components such as cloud computing, application programming interface (API), and storage technologies will be combined in the ICT platform and validated in the climate service domain.

TRL: from 1=min readiness to 9=max readiness.

## 11. QUALITY MANAGEMENT

MED-GOLD is aware of the need to generate high quality materials and tools under the project scope. In this sense, this section describes the quality assurance procedure as part of this plan to ensure that the project and its deliverables conform to the project requirements.

In this document a brief Quality Plan is described, but a detailed descriptions is outlined in RD. 4.

The Quality Plan is managed by the Quality Assurance Manager (QAM), in the case of MED-GOLD is UTH partner, and has the authority to:

- a. Initiate actions to prevent the occurrence of any non-conformity,
- b. identify and record any relevant problem,
- c. initiate, recommend and/or provide solutions through the reporting system,
- d. verify the implementation of solutions,
- e. monitor and control further processing, delivery or installation of any preferred solution to ensure that any reported non-conformance has been corrected.

The Quality Assurance Manager is responsible for ensuring that all documents are controlled effectively. The system contains two levels of documentation under the control of the Quality Assurance Manager in association with the quality peer-reviewers.

**Level 1:** The control of document referencing

**Level 2:** The control of the overall quality of deliverables

### - DOCUMENT REFERENCING AND TEMPLATE

There is a unique document-referencing scheme, valid for official Consortium documents. However, this is not applicable for informal data and views exchange between partners. Nevertheless, if a partner selects not to classify one of their communications, it may not raise claims later, if another partner has not considered it.

Official project deliverables must follow the template (annex A) and they should abide to the following rules:

- Have the next mandatory sections, following the proposed order, prior the main part of the document:

- Document status sheet,
- Revision history log,
- Table of contents,
- List of tables and figures,
- One-page executive summary,
- Introduction (purpose and scope),
- Definitions and acronyms
- Reference documents.

- End the main part with a conclusion section of around 1 page

- Format and style:

- Title: arial, 14, capital letter. Line spacing: 6 above and 6 below.
- Subtitle: arial, 13, capital letter. Line spacing: 18 above and 6 below.
- Subtitle 2: arial, 12, capital letter. Line spacing: 15 above and 6 below.
- Main text: arial, 9. Line spacing: 6 above and 0 below.
- Figure and tables: arial, 9, bold. Line spacing: 6 above and 3 below.

### - DISSEMINATION EVENTS: SCHEDULING AND REPORTING

The Project Coordinator and the Quality Assurance Manager should be informed about the participation of any partner in any event through the completion of the appropriate form (A to D) from annex 1 [RD. 4] which should be sent by email. They are responsible for approving or not the participation in such event, after having received comments from the rest partners in the Consortium, regarding the external communication and dissemination strategy.

For any scientific journal publication or event, the following procedure will be followed:



- Completion of appropriate form (A to D) from Annex 1 [RD. 4] and submission of it to the whole Consortium through e-mail.
- Written acceptance should be sent to the requesting partner within 5 working days from receipt from both the Coordinator and the QAM. Else, it is supposed to be positive.
- The draft paper is then circulated to all project partners before submission. All participants may object to the publication of confidential data or to non-inclusion of their name, if their work is also included. Comments should be sent to the publishing partner with copies to the Project Coordinator and the QAM in the period of 5 days. Then, the author should restructure properly the draft paper. In case of conflict, it is the task of the Project Coordinator and the QAM together to take the final decision.
- After draft acceptance, the revised relevant form from annex 1-A [RD. 4] will be sent to the Project Coordinator and the QAM, together with a copy of the final paper.
- After the dissemination event takes place, a final version of the relevant form from annex 1-D [RD. 4] will be sent again to the Project Coordinator and the QAM for their archives. This should be reported together with the impact activity evaluation report sets in annex C.

The participation in exhibitions through a stand and the presentation of demos of the project results also require prior agreement of the whole project Consortium.

The above rules will be applied and checked by the QAM in order to:

- Avoid repetition of publications of the same work;
- Avoid publication of restrictive, commercial and/or confidence data:
- Avoid misunderstandings between partners and publication of one's work without proper referencing;
- Secure optimum use of dissemination resources of the project:
- Guarantee proper archiving of all dissemination materials.

All approved activities performed in the framework of the project, such as participation in a conference, workshop, publication, report, news or event related to the dissemination of the project must be reported for its monitoring as indicated on section 12.

#### - DELIVERABLE PEER REVIEW AND CONTROL OF NON-CONFORMING DELIVERABLES.

Each deliverable will be reviewed by:

- The QAM.
- Two members of the MED-GOLD project (possibly suggested also by the main author of the deliverable), acting as internal reviewers, which will be the most relevant (technically wise) with the deliverable topic under consideration / examination.

All responsible members after having studied the deliverable under consideration, must evaluate it with respect to its innovation level, correspondence to project and programme objectives, relevance, response to user needs, layout in order to conclude whether the deliverable is accepted or not.

The deliverable under consideration / examination will be forwarded, through the QAM in parallel to the Work Package Leader. The draft version for this procedure needs to be received four (4) weeks before its official publication, as reported in the GA.

The QAM, upon receiving the reports of the two internal experts and integrates his/her own «peer-review report», will compile a list with all the approved deviations that have to be repaired. Furthermore, if it is needed, a «Corrective Actions List» will be defined together with the partner responsible for carrying the action and the required date to be done, always up to five (5) working days. The above list is also forwarded through the QAM to the corresponding Work Package Leaders, for their information, and at the end all corrections should be incorporated by the deliverable authors.

The relevant partner (the main author of the deliverable), after making the modifications suggested by the peer reviewers, has to send back the peer review report, with the "Author response" fields under each question completed. If it is needed, the author may also send a document entitled "summary of main feedback and actions taken", in which, a proper explanation should be given about each action taken as a result of the comments in the overall peer-review report.



## 12. MONITORING AND EVALUATION

All activities performed in the framework of the project, such as participation in a conference, workshop, publication, report, news or event related to the dissemination of the project must be reported by each partner in the following repository: [access](#).

At the same time, the partner responsible for the action should send an assessment-impact report based on annex C to the communication, dissemination and exploitation plan coordinator (GMV) of the activity performed.

In the case of the website and social networks, where there are continuous communication and dissemination tools, an annual report will be sent by the partner in charge of its management.

This monitoring will provide measures of outreach, impact and feedbacks that will be reported in the annual deliverables related to the summary of communication, dissemination and exploitation activities (D6.7, D6.22; D6.23 and D6.24). Therefore, all activity report and impact evaluation must be sent to the WP6 coordinator, GMV, to prepare the annual reports.

The assessment of the different activities will be based on specific indicators linked to the analysis of their impact. These indicators will be also monitored along the project and reported annually.

**Table 11-1 Key Performance Indicators for quantitative and qualitative assessment<sup>2</sup>**

Type of activity		KPI					
Website	Number of visits (5000 sessions/year)	Country distribution (%)	Time spent	Number of downloads of documents available	Observations		
Social networks - twitter	Number of average tweets per week	Number of followers (2000-3000 users)	Number of impressions per month	Number of visits per month	Observations		
MED-GOLD community database	Number of registers (500 stakeholders members)	Type of organization registered (company, public agency, administration, academia, large scale producers, small farmers, SME (%))	Distribution of organizations per sector (%)		Observations		
MED-GOLD online forum	Number of participants on	Type of participants (public institutions, private companies, SMEs, farmers, etc.)	Number of interactions per topic	Satisfaction of the participants			
Newsletters, factsheets, news, report, press release	Number of newsletter (2 e-newsletter/year)	Number of press or news release (6 press release)	Number of journalistic articles (4 articles)	Number of other contributions (6 infosheets)	Type of media	Observations	
Training - Technical materials	Number of publications	Number of downloads or impressions	User feedback	Observations			
Event participation	Number of events participated (10 international conferences)	Distribution of international, national, regional or local events (%)	Number of posters exposed	Number of presentations performed	Type of event (fair, scientific conference, technical exhibition, industrial meeting, etc.)	New contacts engage through the event	Observation

<sup>2</sup> In Italics are specified the expected target values.

Type of activity		KPI						
Workshops (event organization)	Number of workshops organized	Number of attendees	Gender distribution (%)	Age distribution (%)	Country distribution (%)	Professional profile distribution (%)	Participant satisfaction (general, duration, organization, material provided, location, speaker skills, etc.)	
Webinars	Number of webinars organized (3 webinars)	Number of attendees (30 participants / webinar)	Country distribution (%)	Participant satisfaction (general, duration, organization, material, speaker skills, etc.)	Observations			
Scientific publications	Number of publications (10 scientific papers)	Impact factor of the publications	Distribution of international, national, regional or local contributions (%)	Number of downloads	Observations			

In the case of events organized by the partners in the framework of the project, a satisfaction questionnaire will be systematically performed in order to obtain a direct feedback from the attendees. These surveys will be based on annex C, although they can be adapted to the specific activity, to cover in a simple and brief way information about the organization of the action, the appropriateness and relevance of the content, the usefulness of the materials used and provided as any other suggestions from the audience.

Using this external assessment information together with an internal evaluation among the partners (problems or issues detected, target audiences reticence's, degree of compliance with the Plan by the partners), GMV will undertake an annual review of this plan in order to adapt this living document to the real scenario of the project.



## ANNEX A. MED-GOLD TEMPLATE

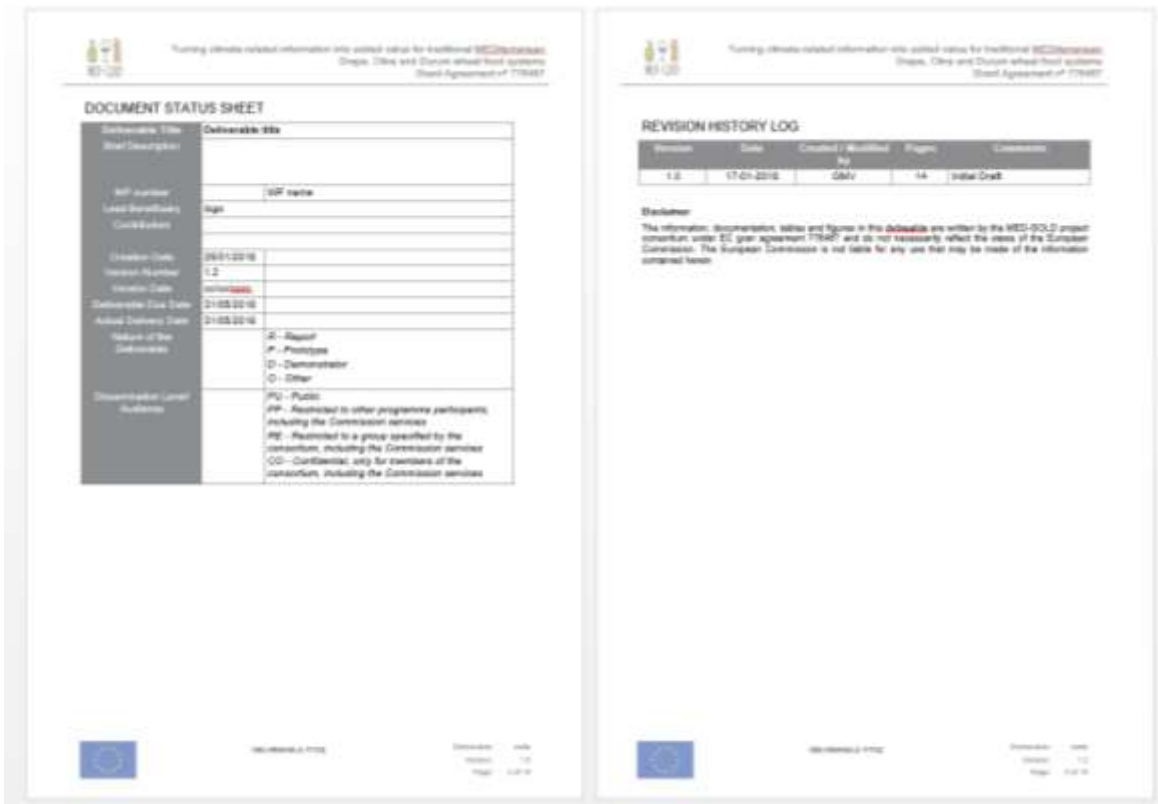


Figure A-1 Template images

## ANNEX B. SOCIAL MEDIA GUIDELINES

Twitter is an excellent choice of social media platform as it has a broad user base (321 million active monthly users globally) and is very readily accessible through smartphones, laptops, computers and other internet-enabled devices. The immediacy of its reach and the possibility for instant impact measurement makes it a very appealing platform for effective stakeholder engagement.

Suggested KPIs for @medgold\_h2020:

1. **Growth:** the @medgold\_h2020 Twitter account follower numbers increases on a month-by-month basis, reaching at least 500 by December 2019. Additionally, the number of accounts that @medgold\_h2020 follows should increase to encompass the broader communities of key stakeholders on this platform, with at least 500 accounts being followed by December 2019.
2. **Performance:** measure engagement rate in addition to number of impressions, and analyse the content types that are most effective with the account's followers in order to improve on a quarter-by-quarter basis.
3. **Engagement:** retweets, mentions, replies and messages are all excellent measures of engagement on Twitter and should be recorded. Trend analysis of these statistics will be useful for planning future content.

To be successful, content posted to Twitter should ideally conform to the following guidelines:

- **Simplicity:** the principle of effective dissemination is to use the best possible words, in the best possible order. Tweets that use simple, unambiguous language (e.g. 'tiny particles' instead of 'aerosols') are much more likely to be engaged with. For further reading and examples of common scientific words and their better alternatives when communicating with the public, see: 'Communicating the science of climate change,' by R. Somerville and S. J. Hassol, Physics Today, 2011.
- **Bias:** everyone has unconscious biases. These can become apparent in the language we use when we engage on social media. It is worthwhile making use of gender-neutral pronouns where appropriate (e.g. 'their' instead of 'his' when the gender of the subject is unknown), and not assuming someone's gender, nationality, religion etc. from their Twitter handle or avatar.
- **Brevity:** Twitter limits its users to only 280 characters per tweet, but that shouldn't be seen as a target. All Tweets should be as short as possible, without removing essential information.
- **Enticing:** the aim of composing a Tweet is to engage with stakeholders. To entice stakeholders and draw them into engaging with the content (e.g. by clicking on links, expanding details of the Tweet, following the account, initiating a conversation etc.) there needs to be something that they find of interest within the content. Tweets should be framed around this.
- **Media:** Tweets with relevant images receive significantly more retweets than those that do not have images. Videos and animated GIFs also improve engagement. The Met Office can be contacted in advance for royalty-free stock images, and in addition Twitter also has a bank of GIFs that are free to use.
- **Connectivity:** there are many other organisations, initiatives and activities that align with the MED-GOLD project's aims. To use social media effectively, it is necessary to form links with these other accounts, e.g. by tagging the account in media images in tweets, and by following and engaging with other key accounts. For instance, the @Climateurope project Twitter account is well placed to provide retweets and boost the stakeholder audience. Deliverable D6.1 contains information about other platforms and initiatives that should be linked with on social media.
- **Hashtags:** using hashtags on Twitter is an excellent way to boost engagement, as it broadens the potential reach of each tweet. Global events (e.g. #InternationalWineDay, #WorldWineDay) should be researched in advance scheduled content should be aligned with this. See table 1 for a selected list of relevant hashtags that could be used. Additionally, hashtags should be created for promoting MED-GOLD activities. These need to be unique, short and intuitive in meaning.
- **Live reporting:** preparation is key for using Twitter when live reporting at events. For instance, when reporting on a talk at a conference, it is recommended to prepare in advance an electronic document with the speaker's name and/or Twitter handle, together with a link to their work and the event hashtag, which can readily be copied and pasted into a tweet with a compelling quote from their talk and a photograph of the action.
- **Scheduling:** roughly 10% of the active accounts on Twitter provide 80% of the content – the key to success on this platform is provision of regular engaging content. There are many tools for managing social media platforms (e.g. Hootsuite) that can be used to effectively manage content posting even when the people



responsible for managing the social media accounts are not physically present at work. Additionally, such social media management tools can be used to monitor engagement statistics.

- **Impact:** each week, a member of the Twitter management team should record the engagement statistics for the MED-GOLD account including: number of tweets, number of followers, number of impressions, profile visits, mentions, in addition to individual stats for each tweet sent. Geographic distribution of followers may also prove to be a useful metric. Analysis of these data can help inform when the best times of day are to tweet content to the account's followers.
- **Tone:** there is a balance to be struck between being informative and authoritative, and being approachable and 'human'. The tone of voice used on social media can have a big impact on how the audience engages with the channel. A good rule of thumb is to aim for conversational and informative. Emojis can be an effective way to humanise otherwise dry content. It is often advisable to say 'we' and 'our' instead of 'me' and 'my' when posting on behalf of a project.

In addition to these guidelines, staff members posting on behalf of @medgold\_h2020 are advised to conform to their institution's social media guidelines.



There are many other social media channels available including LinkedIn, YouTube, Facebook, Instagram etc. Once the MED-GOLD Twitter brand is more established, some of these other platforms may also be investigated for engaging with new audiences.

**Table B-2 Selected relevant hashtags for use on Twitter**

Event name	Date	Hashtag
National Olive Day	1 <sup>st</sup> June 2019	#NationalOliveDay
National Rosé Day	8 <sup>th</sup> June 2019	#NationalRoséDay
International Cabernet Day	29 <sup>th</sup> August 2019	#CabernetDay
International Grenache Day	20 <sup>th</sup> September 2019	#GrenacheDay
Champagne Day	18 <sup>th</sup> October 2019	#ChampagneDay
World Pasta Day	25 <sup>th</sup> October 2019	#WorldPastaDay
International Tempranillo Day	14 <sup>th</sup> November 2019	#TempranilloDay
World Olive Day	24 <sup>th</sup> November 2019	#WorldOliveDay

## ANNEX C. IMPACT ACTIVITY EVALUATION REPORT

Turning climate-related information into added value for traditional MEDiterranean Grape, Olive and Durum wheat food systems  
Grant Agreement n° 776467

---

Event: Logo organizer

Date: \_\_\_\_\_

---

Age: \_\_\_\_\_ Gender: F M

Professional profile: Executive Technician Farmer Other \_\_\_\_\_

Type organization:

Academia Research Administration/Public agency IT service company Farmer/Producer

Other: \_\_\_\_\_

Please, grade your general satisfaction with the event:

1 2 3 4 5 6 7 8 9 10 N/A

Please, grade the next attributes

Duration:	1 2 3 4 5 6 7 8 9 10 N/A
Organization:	1 2 3 4 5 6 7 8 9 10 N/A
Materials provided:	1 2 3 4 5 6 7 8 9 10 N/A
Location / room:	1 2 3 4 5 6 7 8 9 10 N/A
Speaker skills:	1 2 3 4 5 6 7 8 9 10 N/A

Could you grade the usefulness of climate services for you:

1 2 3 4 5 6 7 8 9 10 N/A

In your opinion, which utilities/benefits can provide the use of climate services for agriculture?


Have you used or are you using climate service in your daily activities?

Sector in which you are involved: Olive Grape Durum wheat Other \_\_\_\_\_

Suggestions:

---

Your answers will be anonymously and will be used only to improve future actions.



www.med-gold.eu

**Figure C-1 Impact activity evaluation sheet**





END OF DOCUMENT

