# CLIMED-FRUIT

Adaptation to climate change and mitigation for perennial crops in Mediterranean Area

**HORIZON-CL6-2021-GOVERNANCE-01-23 _ CSA**
**PROJECT 101060474**

*Oct.2022 – Sept.2025*

**Deliverable** D.1.1.2_ A method for selecting the material and practical solutions to be further disseminated

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| Participant responsible | AVA-ASAJA |
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| **Nature of the deliverable** | | |
|---|---|---|
| R | Document, report (excluding the periodic and final reports | X |
| DEM | Demonstrator, pilot, prototype, plan designs, | |
| DEC | Websites, patents filing, press & media actions, videos, etc. | |
| OTHER | Software, technical diagram, etc. | |

| **Dissemination Level** | | |
|---|---|---|
| PU | Public, fully open, e.g., web | X |
| SEN | Sensitive, limited under the conditions of the Grant Agreement | |
| CO | Confidential, restricted under conditions set our in Model Grant Agreement | |
| CI | Classified, information as referred to in Commission Decision 2001/844/EC | |

| | Quality procedure | | | |
|---|---|---|---|---|
| Date of delivery | Version | Date of review | Reviewers | Comments |
| 15/12/2022 | V1 | 20/12/2022 | IFV | |
| 21/12/2022 | V2 | 21/12/2022 | IFV | |
| 27/12/2022 | V3 | 27/12/2022 | CIHEAM-IAMB | |
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## Acknowledgement

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More information on the project can be found on the project website.

## Project summary

CLIMED-FRUIT aims to share knowledge ready for practice, collected from different Operational Groups (OG) across Europe, for a better adaptation to climate change and mitigation, in perennial crops in the Mediterranean Area (grape vine, olive, fruits). The project builds on the results of a core group of 9 OG coordinated by multi-actor consortium members (advisors, farmer organisations, research and education institutes, standardisation organisation), covering several Mediterranean crops in 7 different countries (France, Spain, Portugal, Greece, Italy, Croatia, Serbia). Best practices collected and shared range from (i) soil conservation and carbon storage, (ii) improving resilience of crops facing climatic hazards (frost, hail), (iii) innovative practices for adapting water stress management, (iv) adaption of food chain processes to climate change and diversification, and (v) preserving biodiversity for better resilience to climate change issues and pests. These groups will share their experience through a combination of innovative digital formats, cross-visits and interactive local dissemination events. In addition, new knowledge and practices will be gathered more widely by organising an open contest. Participants from other European projects, other EIP OGs or even international projects from the Mediterranean area will be invited to propose abstracts. A broad online conference will select and pitch the most applicable solutions. Participants will be invited to rank the best presentations according to the cost/benefit ratio, which will then be widely disseminated and shared. Social media channels, videos, podcasts, and crowd writing contests will be used to spread the knowledge. Specific editorial partnerships will be established with the most popular technical reviews. The network will host a forum to capitalise on existing OG experiences and aims to foster new OGs to spread and explore new practical knowledge related to climate change adaptation.

## Objective and executive summary

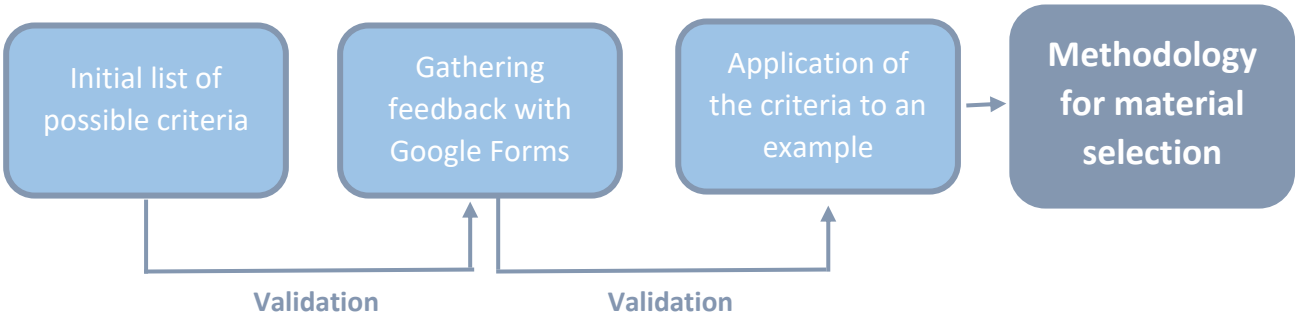
Deliverable 1.1.2 is the product of the activities done in Task 1.1. *Method for selecting material and practical solutions from OG core group,* within the *WP1 – Defining Methods.*

*(Task Leader: AVA-ASAJA Participants: all partners)*

The objective of this deliverable is the definition of a unified methodology for selecting the material and practical solutions to be further disseminated.

For the definition of the unified methodology, it has been proposed to follow an internal validation strategy in several steps, starting from an initial proposal to work on.

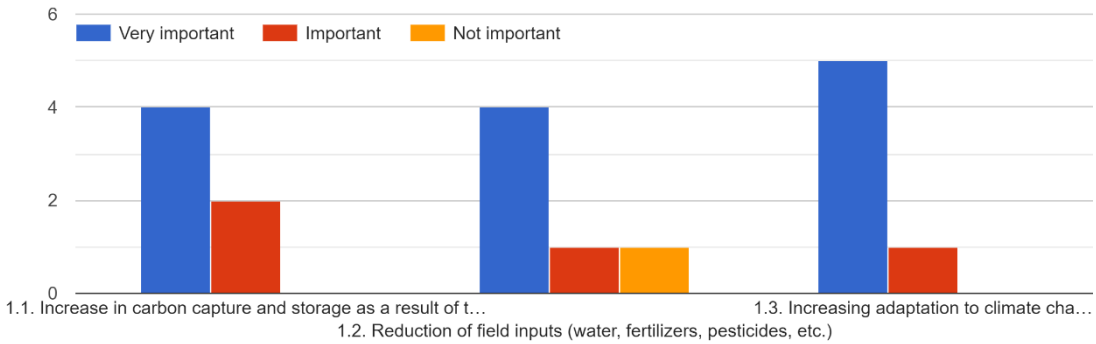
## Elaboration process




In order to establish this methodology, first of all, an initial approach of criteria to be considered, grouped by categories, was carried out. Then, these criteria were validated during an internal telematic meeting held at the end of October 2022.

Once this was done, a Google Forms was created with the criteria initially foreseen, and the partners evaluated the importance of each criterion individually.

The following figure shows, as an example, one of the votes of the partners on the importance of the criteria of one of the categories, with a view to evaluating whether or not to include it in the methodology.




After this phase of the process, a meeting was organized to discuss the results of the Google Forms voting and analysing the proposals made by some of the partners. These proposals aimed to include new criteria or modify the wording of some of the already proposed criteria.

The criteria selected were as follows:

1. **Impact on climate change**

1.1. Increase in carbon capture and storage as a result of the implementation of the solution
1.2. Reduction of field inputs (water, fertilizers, pesticides, energy, etc.)
1.3. Increasing adaptation to climate change (new tolerant rootstocks, new varieties, need for less water, increased tolerance to pests and diseases, ecological infrastructure development and diversification, etc.)
1.4. Biodiversity preservation for greater resilience to climate change

2. **Dissemination**

2.1. Crop access: Europe-wide utility (not variety or situation specific)

2.2. Practice access: Accessibility of technology or practice around Europe
2.3. Allows further research based on the results of the OG
2.4. Ease of understanding and communication of the method or practice

### 3. Implementation of the practice

3.1. Level of the newness of the technique, practice or technology
3.2. Efficiency in-field productivity
3.3. Economic cost-effectiveness in the application of the solution, considering implementation costs and associated savings or benefits.
3.4. Replicability of the solution (in terms of ease of implementation by the grower)

After the final formulation of the criteria, and in order to validate them, several members applied these criteria to an example factsheet on agricultural practice, and a telematic meeting was held to share impressions and make proposals for improvement.

Finally, with the methodology for the selection of materials validated, it was agreed to prepare a simple tool for the evaluation of the practices.

## Methodology for the selection of the materials

A methodology has been created to objectively select materials and best practices among the different alternatives.

In particular, the methodology devised consists of evaluating different methodologies with the same criteria, scoring from 0 to 5 for each of them, with 5 being the highest value and 0 the lowest. This scale has been chosen instead of another that reaches a higher value, in order to simplify the evaluation of materials.

Additionally, the option has been considered that a criterion may not be applicable to a specific material. In this case, the option not applicable (N/A) would be selected. However, this N/A option should not be selected if the material can meet this criterion and does not do so, or if it intends to impact this criterion but fails to do so.

On the other hand, in order to provide the greatest possible objectivity, it has been proposed that the evaluation of each of the materials be carried out individually by each of the project partners. Therefore, all scores will be entered into a common tool (excel file, see below). In addition, experts per type of crop will be designated within the consortium to check the concordance of the scores with the reality of the field. In this way, some possible discrepancies in criteria would be neutralized.

Once each member has completed the individual evaluation, the total sum of all the scores for each category will be carried out. These will ultimately be aggregated to obtain the final practice evaluation score.

It should be noted that, for each category, a minimum score has been initially established[1], which must be reached by the different practices scored in order to qualify for the final evaluation and comparison.

[1] These values have been established on an indicative basis. However, during the application of the methodology, in the event that more appropriate scoring limits are identified, they will be adjusted.

In addition, both the scores and the initially established limits will be adapted to each Operational Group.

These minimum values for each section are as follows:

- **Section 1: Impact on climate change**

A practice must obtain as a minimum a score of **3 out of 5** for at least one of the four parameters (1.1., 1.2., 1.3., or 1.4.).

- **Section 2 : Dissemination**

In the case of dissemination, and being the main objective of the CLIMED-FRUIT project the dissemination and diffusion of selected materials and practices, tending to the improvement of climate change, we can consider that a minimum score is not required.

Therefore, this aspect could be considered an "extra score" for the practice.

- **Section 3: Implementation of the practice**

Regarding the first criterion, "3.1. Level of the newness of the technique, practice or technology", and understanding that the concept of the newness of practice is quite subjective, it is considered that this criterion should not be eliminatory, so **no minimum score is established**. In that sense, and in the case that the practice is new and with little implementation, the other three criteria may improve with time and the adoption of the practice in the field.

For all the other criteria (3.2., 3.3., and 3.4.), a minimum of **2 out of 5** points have been set.

To facilitate the identification of materials that do not exceed the minimum score chosen, warnings have been included in the Excel sheet that will be used for the evaluation (see below).

With the application of this unified methodology, the materials with the highest scores will be selected. Notwithstanding the above, an attempt will be made to maintain a minimum presence of the different crops in order to maintain their representativeness.

## Excel template for scoring materials

An internal Excel document has been generated to automatically calculate the score for each material evaluated. A screenshot of the Excel sheet is shown below:

## Template for the evaluation of materials and practical solutions to be disseminated

**Name of the material evaluated:**

| | IFV | VIN | SEASN | IPN | CIHEAM-IAMB | AVA-ASAJA | HMU | UNE | APPITAD | Total / criterion | Score/ section | Limit check |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1. Impact in climate change** | | | | | | | | | | | 54,0 | LIMITS OK |
| 1.1. Increase in carbon capture and storage as a result of the implementation of the solution | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 27,0 | | A selected practice must obtain a 3/5 for at least one of the four criteria |
| 1.2. Reduction of field inputs (water, fertilizers, pesticides, energy, etc.) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 9,0 | | |
| 1.3. Increasing adaptation to climate change (new tolerant rootstocks, new varieties, need for less water, increased tolerance to pests and diseases, ecological infrastructure development and diversification, etc.) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 9,0 | | |
| 1.4. Biodiversity preservation for greater resilience to climate change | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 9,0 | | |
| **2. Dissemination** | | | | | | | | | | | 64,0 | NO MINIMUM SCORING |
| 2.1. Crop access: Europe-wide utility (not variety or situation specific) | 2 | 1 | 1 | 4 | 2 | 3 | 2 | 3 | 5 | 23,0 | | |
| 2.2. Practice access: Accessibility of technology or practice around Europe | 2 | 2 | 2 | 2 | 3 | 1 | 2 | 1 | 1 | 16,0 | | |
| 2.3. Allows further research on the basis of the results of the OG | 2 | 2 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 23,0 | | |
| 2.4. Ease of understanding and communication of the method or practice | N/A | N/A | N/A | 0 | N/A | N/A | N/A | 2 | N/A | 2,0 | | |
| **3. Implementation of the practice** | | | | | | | | | | | 81,0 | Does not exceed the minimum score |
| 3.1. Level of newness of the technique, practice or technology | 3 | 1 | 2 | 2 | 2 | 1 | 3 | 0 | 3 | 17,0 | | A selected practice must obtain a 2/5 (18 points) in each criteria |
| 3.2. Efficiency in field productivity | 2 | 2 | 4 | 3 | 4 | 3 | 3 | 2 | 3 | 26,0 | | |
| 3.3. Economic cost-effectiveness in the application of the solution, considering implementation costs and associated savings or benefits. | N/A | 1 | 1 | 0 | 1 | 5 | 5 | 5 | 1 | 19,0 | | |
| 3.4. Replicability of the solution (in terms of ease of implementation by the grower) | 0 | 0 | 1 | 1 | 1 | 1 | 5 | 5 | 5 | 19,0 | | |
| **TOTAL / Partner** | 17,00 | 15,00 | 20,00 | 21,00 | 20,00 | 23,00 | 29,00 | 27,00 | 27,00 | | | |

| FINAL SCORE | 199,00 |
|---|---|

**Instructions**

The evaluation of the materials will be carried out by scoring each of the criteria from 0 to 5.

In the case that a practice has no impact on a climate change parameter, it will be scored as N/A (not applicable).

It should be taken into consideration that, if the practice intends to, or may have, an impact on a climate change parameter but does not, it should be evaluated with a 0, not as N/A.