



COMMISSION COMMISSION I « Viticulture »

**“SUSTAINABLE DEVELOPMENT AND
CLIMATE CHANGE”
GROUP**

Proceedings report for the 12th session
Date: 02/04/2024 and 03/04/2024
Place: hybrid format (in-person in Dijon and
Videoconference Kudo)

**SUMMARY SHEET OF THE WORK OF THE SUB-COMMISSIONS AND EXPERT GROUPS**

Group of experts: « SUSTAINABLE DEVELOPMENT AND CLIMATE CHANGE »

Date: 02/04/2024 and 03/04/2024

Number of Experts present on 02/04/2024: 68 on-line, 20 in person (23 member States and 3 Observers)

Number of Experts present on 03/04/2024: 70 on-line, 22 in person (23 member States and 3 Observers)

I/ Resolutions

| Document | Step | Subject | Follow up (step of the procedure) |
|---------------------|------|---|--|
| VITI-SUSTAIN 24-XXX | 1 | General principles of the OIV greenhouse gas accounting protocol for the vine and wine sector | <p>The Italian Delegation presented a proposal of substantial revision of the Resolution OIV-CST-431. To this aim a new draft Resolution is presented at step 1 to update the Resolution OIV-CST-431, by also including some relevant aspects of the Resolution OIV-CST 503AB-2015. The combined revised Resolution will allow the withdrawal of the predecessors, OIV-CST-431 and CST 503AB-2015.</p> <p>The project of resolution moves forward step 3.</p> |
| VITI-SUSTAIN 24-XXX | 1 | Conservation of nature and biodiversity in the vitivinicultural sector | <p>Draft Resolution at step 1 was presented by the Portuguese Delegation. The eWG17 was already established under the coordination of Antonio Graça and it will be reactivated to include comments into a consolidate version to be sent for consultation to the member States.</p> <p>The project of resolution moves forward step 3.</p> |
| VITI-SUSTAIN 23-720 | 3 | Strategies for adaptation of the viticultural sector to climate change. Resilience | <p>The Secretariat presented the text consolidated with the comments of the Delegations. The President highlighted that the document is not well scoped and the eWG2 should be reactivated by also including experts from economic areas to provide a substantial revision. The Secretary proposed to redraft it and the French Delegation, in agreement with that proposal, was designated to coordinate the eWG2 reactivation. The Secretariat remarked that the discussion on the topic has been ongoing since 2015 and significant progress needs to be made on this important concept. The President proposed to not move the resolution and to mandate the eWG2 to establish a new draft.</p> <p>The project of resolution is kept at step 3.</p> |



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| VITI-SUSTAIN 22-716 | 5 | OIV Definition and recommendations about the importance of mountain and steep-slope viticulture in the vitivinicultural sector | The Secretariat presented the text consolidated with the comments of the Delegations. The Portuguese Delegation presented a new proposal to treat the definition of mountain and steep-slope viticulture, after the French Delegation had raised firm and motivated opposition. Following the additional amendments by the Italian and Spanish Delegation, a final consolidated text was agreed on. After the meeting the text will be completely consolidated in form and language, before to be sent for the final consultation. |
| The project of resolution moves forward step 7. | | | |
| VITI-SUSTAIN 20-680 | 5 | OIV Definition and recommendations for Agroecology in the vitivinicultural sector | The Italian Delegation presented the amendments proposed as the result of previous concerns and oppositions. After a minor revision, the amendments were agreed by the French, Portuguese, and Spanish Delegations. The Secretariat also presented the comments on the form and language submitted by other Delegations, which will be included in the text before it will be send for the final consultation. |
| The project of resolution moves forward step 7. | | | |

II/ Ongoing actions

| Document | Subject | Follow up (step of the procedure) |
|----------------------|---|--|
| CI-SUSTAIN 2024-04 6 | Introduction to “regenerative Viticulture” Presentation by Mr. Luis Henriquez -Viticulturist | Mr. Luis Henriquez presented the history, concept and practices of regenerative Viticulture. An extended debate took place especially on the relation between these concepts and agroecology, organic and biodynamic Viticulture. There is an opportunity to establish an OIV definition. |
| CI-SUSTAIN 2024-04 8 | Viticulture in arid climates Presentation of the draft Exp. Col. Doc. | The President introduced the current state of the document, which was drafted by the coordinator and consolidated by the Secretariat. Israelian, French and Chilean Experts offered their expertise to develop the document further and to include the existing information on existing technologies on how to adapt Viticulture to these conditions. The President proposed to the Secretariat to schedule a virtual meeting to establish the final scope and to better clarify the objectives around this large theme. |
| CI-SUSTAIN 2024-04 9 | Introduction to the project “Fire Wine” Presentation by Dr. Soazig Darnay – Researcher at CTFC (Spain) | Dr. Soazig Darnay presented the Fire Wine project aimed at the risk evaluation and prevention of fires in viticultural regions. |



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| CI-SUSTAIN 2024-04 10 | Importance of microbial biodiversity in the context of sustainable viticulture Presentation of the final Exp. Col. Doc. | The coordinator presented the final version of the expertise collective document including high quality illustrations, which is being submitted to the editorial committee for the final revision. The President has also reported very minor corrections. The document will be soon published by the OIV. |
| CI-SUSTAIN 2024-04 11 | Sustainability and eco-design in the cellar Drafting the Exp. Col. Doc. | The President introduced the current state of this complex action based also on the decisions of the last meeting. The coordinator presented the overall revision of the document based on the environmental aspects associated with sustainability aspects in the cellar. The German Delegation performed a substantial update, which was presented and approved by the Group. The Secretariat proposed to involve the head of unit oenology and two experts of Commission II for a revision on the aspects related to the oenological practices. The eWG5 will be reactivated to proceed with the document finalisation. |
| CI-SUSTAIN 2024-04 12 | OIV/CIHEAM course "Sustainable Water and Soil Management for Resilient Viticulture" Communication by OIV Secretariat | The Secretariat presented the joint training program organised by OIV with CIHEAM Zaragoza in the framework of the cooperation established between both Intergovernmental Organisations. The training will involve also SUSTAIN experts as lecturers and it will approach aspects relevant to the SUSTAIN work program. |
| CI-SUSTAIN 2024-04 13 | Review of the latest climate change indicators Presentation by the SUSTAIN Board | The President presented the review of the latest climate change indicators. The presentation encouraged a debate between the SUSTAIN experts mainly focused on the question of how close the situation is with respect to climate tipping points; the most vulnerable regions of the world; and priority actions to adapt to climate changes. |
| CI-SUSTAIN 2024-04 14 | Methodologies review of WFP calculation for vineyards Drafting the Exp. Col. Doc. | The Secretariat introduced the updated version of the document and the main questions addressed by the experts to the coordinator. The coordinator presented the principles for a possible future OIV Resolution on water footprint calculation. The President suggested to reinforce the expertise collective document with few existent data from diverse environmental conditions which could be provided by the current study supervised by the coordinator. After this a decision will be made about moving towards a resolution on the subject. |
| CI-SUSTAIN 2024-04 15 | Calculation of the CO2 footprint using the example of Austrian wine Presentation by Dr. Franz Rosner | Dr. Franz Rosner presented the system of the Carbon Footprint Calculation in the Austrian wine sector. |
| CI-SUSTAIN 2024-04 16 | Methodological recommendations for accounting for GHG | The action leader, Mr. Andres Valero, was invited by the President to present the current status of the first volume of several planned collective expertise |



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| | balance in the vitivincultural sector Drafting the Exp. Col. Doc. | documents and the next steps to draft the following volumes established in the work program. |
| CI-SUSTAIN 2024-04 17 | Revision of Resolution: OIV-CST-431 General principles of the OIV greenhouse gas accounting protocol for the vine and wine sector | The Italian Delegation presented a proposal of substantial revision of the Resolution OIV-CST-431. To this aim a new draft Resolution is presented at step 1. |
| CI-SUSTAIN 2024-04 18 | Revision of Resolution: OIV-CST 503AB-2015 Greenhouse gas accounting in the vine and wine sector – Recognized gases and inventory of emissions and sequestrations | The Italian Delegation proposed to withdraw this Resolution since the main important aspects of this Resolution will be included into the new draft of Resolution OIV-CST-431. |
| CI-SUSTAIN 2024-04 19 | The INBIODYN trial at the Hochschule Geisenheim University (HGU) Presentation by Dr. Johanna Doering – Researcher at HGU (Germany) | Dr. Johanna Doering presented the outcomes of the most important existing long-term experiment trial concerning the comparison of integrated, organic and biodynamic Viticulture. |
| CI-SUSTAIN 2024-04 20 | The biodynamic practices and their certifications Presentation by Adriano Zago – Founder and Director at Cambium Farm (Italy) | Mr. Adriano Zago presented an overview on the biodynamic practices in Viticulture and the existent certifications for biodynamically farmed vineyards and their produced wines. |
| CI-SUSTAIN 2024-04 21 | Biodynamic practices: identification and application in viticulture Drafting the Exp. Col. Doc. | The Brazilian Delegation presented the principles and the objectives of a new draft expertise collective document. The SUSTAIN group agreed to establish a new eWG under the coordination of the Brazilian Delegation. |
| CI-SUSTAIN 2024-04 22 | Sustainable soil management in vineyard Presentation by Dr. Paul Luu – Executive Secretaire 4p1000 Initiative | Dr. Paul Luu presented an overview on the 4p1000 initiative and the main goals and focus areas, the strategic plan and the strategic objectives established by the cooperation with the OIV. The President recalled his own article on the feasibility of 4p1000 including aspects of changing soil temperatures with climate change in Geisenheim. |
| CI-SUSTAIN 2024-04 23 | Proposal of new works | The Brazilian Delegation proposed to develop measures for saving the heritage of wine regions across the world threatened by climate change. The Portuguese Delegation supported the proposal to develop new OIV media initiatives (videos, podcasts a.o.) for disseminating all the work already done and published related to climate change. The delegation also reminded that the OIV was created to facilitate cross-border |



commercial exchanges through science-based normative work, therefore this work is at the core of the organization.

The Director General encouraged the development of two larger projects based on existing resources, resilience is probably a valid topic for this, and sustainability to become an overarching concept for the future of the wine sector.

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| CI-SUSTAIN 2024-04 24 | Proposal of topics for the OIV Grants 2025 | The Spanish Delegation suggested to support water footprint methodologies experimentation across different regions. |
| CI-SUSTAIN 2024-04 25 | Any other business | None. |

III/ Questions from the Strategic Plan

| Ref SP | Theme and treatment | Follow up |
|--------|---------------------|-----------|
|--------|---------------------|-----------|

IV/ Request for additional information or opinion (statistics, economy, legal, technical, health)

| Information | Source |
|-------------|--------|
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V/ Presentations other than point II

| Author | Country | Subject | Follow up |
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VI/ Items on the agenda for the next session (without prejudice to subjects which may be added later)

| Author | Country | Subject | Follow up |
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VII/ Other items

| Author | Country | Subject | Follow up |
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Date

Name and signature of the author of the
proposal

03/04/2024

Hans Schultz
President of SUSTAIN Group

Enrico Battiston
Head of Unit « Viticulture »

**AGENDA¹****12th meeting****Tuesday, 2nd April 2024 – 9.00 am to 6.00 pm (UTC+1) (Paris Time)****Wednesday, 3rd April 2024 – 9.00 am to 5.00 pm (UTC+1) (Paris Time)****Hybrid format (Salle du Conseil, Cour de Flore, 21000 Dijon and Videoconference KUDO)**

| Tuesday, 2nd April 2024 | | | | | |
|---|---|----------------------|------------------------|---|-----------------------|
| No. | Item | Research Area | No. OIV WP 2024 | Working paper | Time available |
| 1. | Adoption of the agenda | | | CI-SUSTAIN 2024-04 OJ | 10 min |
| 2. | Approval of the statement of conclusions of the last expert group session | | | CI-SUSTAIN 2023-09 CR | 10 min |
| 3. | <u>Resolution Step 1</u> : Conservation of nature and biodiversity in the vitivinicultural sector | I.1. | 276 | CI-SUSTAIN 2024-04 3 | 20 min |
| 4. | <u>Resolution Step 3</u> : Strategies for adaptation of the viticultural sector to climate change. Resilience | IV.1. | 288 | VITI-SUSTAIN 23-720_comm / CI-SUSTAIN 2023-09 4 | 50 min |
| 5. | <u>Resolution Step 5</u> : OIV Definition and recommendations about the importance of mountain and steep-slope viticulture in the vitivinicultural sector | I.1. | 163 | VITI-SUSTAIN 22-716_comm | 50 min |
| Coffee break | | | | | 20 min |

¹ **Note:** Topics that delegations wish to add in accordance with the 2024 work program, will be discussed under the item "proposals of works".

In that sense, the filled document with the project presentation must be returned to the OIV Secretariat with the working documents on the topic in question at least **15 days** before the date of the OIV meetings, so that the delegates and experts may read these carefully. If the deadline is failed, the subject will not be presented during the meeting.

Warning: Taking into account the logistical and technical imperatives linked to the organisation of video-conferences, delegates and experts who plan to provide a document or make a presentation in accordance with the agenda are requested to do so **no later than March 15, 2024**.

Otherwise, it will be technically impossible to share their document or presentation via the video conference system.



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| 6. | Introduction to “regenerative viticulture” <i>Presentation by Mr. Luis Henriquez -Viticulturist</i> | IV.1./III.4. | 288/45 | CI-SUSTAIN 2023-09 6 | 30 min |
| 7. | <u>Resolution Step 5</u> : OIV Definition and recommendations for Agroecology in the vitivincultural sector | III.4. | 45 | VITI-SUSTAIN 20-680_comm | 50 min |
| Lunch Break | | | | | 90 min |
| 8. | Viticulture in arid climates <i>Presentation of the draft Exp. Col. Doc.</i> | I.1. | 275 | CI-SUSTAIN 2024-04 8 | 60 min |
| 9. | Introduction to the project “Fire Wine” <i>Presentation by Dr. Soazig Darnay – Researcher at CTFC (Spain)</i> | I.1. | 246/275 | CI-SUSTAIN 2024-04 9 | 30 min |
| 10. | Importance of microbial biodiversity in the context of sustainable viticulture <i>Presentation of the final Exp. Col. Doc.</i> | I.1. | 246 | CI-SUSTAIN 2024-04 10 | 30 min |
| Coffee break | | | | | 20 min |
| 11. | Sustainability and eco-design in the cellar <i>Drafting the Exp. Col. Doc.</i> | I.1. | 51 | CI-SUSTAIN 2024-04 11 | 40 min |
| 12. | OIV/CIHEAM course "Sustainable Water and Soil Management for Resilient Viticulture" <i>Communication by OIV Secretariat</i> | | | CI-SUSTAIN 2024-04 12 | 15 min |

Wednesday, 3rd April 2024

| No. | Item | Research Area | No. OIV WP 2024 | Working paper | Time available |
|-----|--|---------------|-----------------|-----------------------|----------------|
| 13. | Review of the latest climate change indicators | III.1. | | CI-SUSTAIN 2024-04 13 | 30 min |



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| | <i>Presentation by the SUSTAIN Board</i> | | | | |
| 14. | Methodologies review of WFP calculation for vineyards <i>Drafting the Exp. Col. Doc.</i> | II.1. | 65 | CI-SUSTAIN 2024-04 14 | 90 min |
| Coffee break | | | | | 20 min |
| 15. | Calculation of the CO2 footprint using the example of Austrian wine <i>Presentation by Dr. Franz Rosner</i> | III.2. | 201 | CI-SUSTAIN 2024-04 15 | 30 min |
| 16. | Methodological recommendations for accounting for GHG balance in the vitivinicultural sector <i>Drafting the Exp. Col. Doc.</i> | II.1. | 201 | CI-SUSTAIN 2024-04 16 | 30 min |
| 17. | <u>Revision of Resolution:</u> OIV-CST-431 General principles of the OIV greenhouse gas accounting protocol for the vine and wine sector | III.4. | 237.1 | CI-SUSTAIN 2024-04 17 | 20 min |
| 18. | <u>Revision of Resolution:</u> OIV-CST 503AB-2015 Greenhouse gas accounting in the vine and wine sector – Recognized gases and inventory of emissions and sequestrations | III.4. | 237.2 | CI-SUSTAIN 2024-04 18 | 20 min |
| Lunch Break | | | | | 90 min |
| 19. | The INBIODYN trial at the Hochschule Geisenheim University (HGU) <i>Presentation by Dr. Johanna Doering – Researcher at HGU (Germany)</i> | III.2. | 307 | CI-SUSTAIN 2024-04 19 | 20 min |
| 20. | The biodynamic practices and their certifications <i>Presentation by Adriano Zago – Founder and Director at Cambium Farm (Italy)</i> | III.2. | 307 | CI-SUSTAIN 2024-04 20 | 20 min |
| 21. | Biodynamic practices: identification and application in | III.4. | 307 | CI-SUSTAIN 2024-04 21 | 40 min |



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| | viticulture <i>Drafting the Exp. Col. Doc.</i> | | | | |
| 22. | Sustainable soil management in vineyard <i>Presentation by Dr. Paul Luu – Executive Secretaire 4p1000 Initiative</i> | III.4. | 205 | CI-SUSTAIN 2024-04 22 | 40 min |
| 23. | Proposals of new works | | | | 10 min |
| 24. | Proposal of topics for the OIV Grants 2025 | | | | 10 min |
| 25. | Any other business | | | | 10 min |

Research Areas of SUSTAIN

I. Characterization and development of environmentally-friendly production systems

I.1. Sustainable development and societal responsibility

II. Evaluation of environmental performance

II.1. Methodologies for evaluation of environmental impact as part of a multi-criteria approach. Identification of existing methods and adaptation of methods to the viticultural sector

II.2. Complete evaluation: multi-criteria and multi-stage – Life-Cycle Assessment (LCA)

III. Strategies to reduce the environmental impact

III.1. Collection of information on the actions/policies put in place by central authorities that are applicable to the viticultural sector (legislation, financial incentives, national programs)

III.2. Collection of information on collective approaches aiming to reduce the environmental impact

III.3. Identification of innovations and innovative practices for good environmental management

III.4. Guidelines for good environmental management

IV. The vitivincultural sector and climate change

IV.1. Strategies for adaptation of the viticultural sector to climate change

V. Communication and development of collective approaches in relation to the environment

V.1. Inventory of communication approaches in relation to good environmental management



INTRODUCTION

1. Adoption of the agenda

The President (Prof. Hans Schultz) of the Group opened the session in the presence of the Vice-President (Mr. Jacques Gautier), the secretary (Mr. Antonio Graça), the Head of Unit Viticulture (Dr. Enrico Battiston), and 88 Delegates and Experts from 23 member States and 3 Observers.

2. Approval of the statement of conclusions of the last Expert Group session

The conclusions for the 11th session of the Expert Group were unanimously approved.

RESOLUTIONS

3. Resolution VITI-SUSTAIN 23-720

- 3.1. The Secretariat presented the text consolidated with the comments of the Delegations, by reminding the complexity of the topic, particularly the transition from the expertise collective document developed since the project's initiation in 2015, to the current draft resolution.
- 3.2. The President by opening the discussion disagreed to refer to the Klia-NET project in the document because of its completely different scope and set-up and remarked that there is substantial more work needed, including also a basic discussion on the appropriateness of the title.
- 3.3. Etienne Neethling (FRA) suggested to not focus only on climate change, but on vulnerabilities and ways of tackling them. He confirmed the availability to coordinate the action.
- 3.4. Andrea Pitacco (ITA) clarified the transformative nature of resilience, which is not only intended as adaptative capacity but as structural reaction to guarantee functionality.
- 3.5. Andres Valero (INV) mentioned the importance of considering human and social aspects of resilience.
- 3.6. Michele Borgo (ITA) underscored the importance of a clear scope with respect to resilience for the vitivinicultural sector, by agreeing with the comment of AUS Delegation to reconvert the project into an expertise collective document.
- 3.7. Mario De la Fuente (ESP) called for a clear definition of the document's purpose, as the documents current only focus on viticulture seems too small. The document should be well refocused with an all-encompassing approach for the grape and wine system.

- 3.8. The President agreed that the document is not well scoped. The eWG2 should include expertise from economic areas.
- 3.9. Antonio Graça (PRT) proposed to scrap the present document and start a new draft. The proposal was agreed by Etienne Neethling (FRA).
- 3.10. Jacques Gautier (FRA) underscored the need of involving experts from other commissions in this task as is the nature of SUSTAIN work.
- 3.11. Andrea Pitacco (ITA) called attention to the syntactical work needed. Semantics are very important in this issue.
- 3.12. Eugenio Pomarici (ITA) offered to support the working group with his and Antonio Seccia's economic expertise.
- 3.13. The President proposed to not move the resolution and to mandate the eWG2 to establish a new draft. The project of resolution was kept at step 3.

4. Resolution VITI-SUSTAIN 22-716

- 4.1. The Secretariat presented the text consolidated with the comments of the Delegations.
- 4.2. The Portuguese Delegation presented a new proposal to treat the definition of mountain and steep-slope viticulture after the French Delegation had raised firm and motivated opposition.
- 4.3. The President highlighted that the new definition is based on international references, which consider the criteria for the eligibility of mountain and steep-slope vineyards for financial support from regional or federal government organisations upon international agreement.
- 4.4. Roberto Gaudio (ITA) underlined the importance of calling attention to the permanent structural hardships inflicted on these regions.
- 4.5. Mario De la Fuente (ESP) called for highlighting the situations of vineyards deemed “heroic” as defined by CERVIM.
- 4.6. Roberto Gaudio (ITA) confirmed the availability of CERVIM to integrate their technical expertise in the development of this resolution.
- 4.7. Jacques Gautier (FRA) remarked that the importance of all policies of public support for these types of viticulture is integrated by this definition.
- 4.8. Fernando Alves (PRT) underscored the remarks of the text about the difficulty of working steep slopes as being very clear. The OIV being a public organization should recognize all organizations linked to steep slope and mountain viticulture (cited ADVID in Portugal for example).
- 4.9. Vittorino Novello (ITA) disagreed to move it to step 7 as there are several changes in the text. Asked to postpone decision to next day's session. Proposal agreed by the Group.
- 4.10. After conversations between Delegates, ITA, FRA, PRT, ITA and ESP waived its disagreement. The project of resolution moved at step 7.

5. Resolution VITI-SUSTAIN 20-680

- 5.1. The Italian Delegation presented the amendments proposed as the result of previous concerns and oppositions.
- 5.2. Fernando Alves (PRT) considered there are a lot of new additions that require time for analysis and consideration. Proposes to move this topic for next days agenda before deciding. The Group agreed to postpone.
- 5.3. The Portuguese Delegation accepted the new additions, and all comments will be incorporated by the Secretariat.
- 5.4. Mario De la Fuente (ESP) indicated that he did not receive the revised documents, therefore he requested more time to revise the document before approving it. The Group agreed to postpone.
- 5.5. The Secretariat also presented the comments on the form and language submitted by other Delegations, which will be included in the text before it will be send for the final consultation.
- 5.6. The President verified that the updated text did not receive any objection. The project of resolution moved to step 7.

ONGOING ACTIONS

6. Introduction to “regenerative viticulture” - Presentation by Mr. Luis Henriquez - Viticulturist

- 6.1. Luis Henriquez presented the history, concept and practices of regenerative Viticulture.
- 6.2. Alistair Nesbitt (GBR) announced that a guide will be published by the Regenerative Agriculture Foundation soon.
- 6.3. Juan Del Aguila (BRA) asked about the difference between integrated, organic and regenerative viticulture and Luis Henriquez explained that it is an evolution from integrated and organic, closer to biodynamic without astrological concepts.
- 6.4. Eugenio Pomarici (ITA) asked about the relation between regenerative agriculture and agroecology, and Luis Henriquez explained that agroecology is part of the science behind regenerative, a sort of toolbox for application.
- 6.5. Aaron Fait (ISR) suggested to explore the application of the concept to arid climates.
- 6.6. Jacques Gautier (FRA) warned about the risk of having confusions between the proliferation of definitions.
- 6.7. Antonio Graça (PRT) asked about the benefits of conservation tillage and if focus on the soil is not taking attention away from the whole system, and Luis Henriquez explained that regenerative approaches consider no-tillage or reduced tillage, so conservation tillage can be included. Overplaying soil is not a risk in regenerative agriculture, regional

considerations are dominant in defining which practices to apply and where to apply them.

- 6.8. The President highlighted the problem of downscaling the concepts to the regional advisory system to benefit individual enterprises.
- 6.9. Andres Valero (INV) called attention to the consideration of this topic in resolution VITI-641. Warned that introduction of livestock may work against biodiversity.
- 6.10. Etienn Neethling (FRA) asked about the extra costs of applying and certifying regenerative practices as usually these costs cannot be completely reflected in wine prices.
- 6.11. Aaron Fait (ISR) highlighted that there is nothing to regenerate in an arid environment and asked how does this cope with the concept of regenerative. Luis Henriquez explained that wherever there is a crop, there is a need to recover and regenerate.

7. Viticulture in arid climates - Presentation of the draft Exp. Col. Doc.

- 7.1. The President introduced the current state of the document, which was drafted by the coordinator and consolidated by the Secretariat.
- 7.2. Aaron Fait (ISR) suggested that experts in the field are given specific tasks for different sub-chapters.
- 7.3. Mario De la Fuente (ESP) proposed the document structure and suggested to make an inventory across all experts' countries of aridity situations in their respective wine regions in order to identify situations that would not be detected otherwise.
- 7.4. Joel Rochard (FRA) recalled his presentation from 2022 at the OIV Congress in Mexico, regarding the situations in arid climates and how they are affected by climate change including propositions for adaptive solutions.
- 7.5. Franz Rosner (AUT) recalled the problems of salinity as a contributing factor to aridity and its enhancement.
- 7.6. Kees Van Leeuwen (FRA) underscored the work done and mentioned by Joel Rochard, especially in the case of very dry regions where solutions have been developed over centuries and even millennia.
- 7.7. The Secretariat summarized the discussion indicating the need for a virtual meeting to define the work before proceeding with the document development.
- 7.8. Patricio Parra (CHL) offered Chilean expertise for the document drafting.
- 7.9. The President proposed to the Secretariat to schedule a virtual meeting to establish the final scope and to better clarify the objectives around this large theme.

8. Introduction to the project “Fire Wine” Presentation by Dr. Soazig Darnay – Researcher at CTFC (Spain)

- 8.1. Dr Soazig Darnay presented the Fire Wine project aimed at the risk evaluation and prevention of fires in viticultural regions.

- 8.2. Joel Rochard (FRA) suggested to consider the theme in the SUSTAIN framework by launching a new action aimed at risk evaluation.
- 8.3. The Secretariat asked the Group if there could be any relevance/overlap with the action “viticulture in arid climate”, however the Group unanimously did not see it.
- 8.4. Franz Rosner (AUT) requested more information about the use of the project’s logo by the partners.
- 8.5. Mario De la Fuente (ESP) suggested to consider the development of a project of resolution.

9. Importance of microbial biodiversity in the context of sustainable viticulture - Presentation of the final Exp. Col. Doc.

- 9.1. The coordinator presented the final version of the expertise collective document including high quality illustrations, which is being submitted to the editorial committee for the final revision.
- 9.2. The President has also reported very minor corrections for the final text.
- 9.3. The Secretariat informed the Group about the editing process in progress.

10. Sustainability and eco-design in the cellar - Drafting the Exp. Col. Doc.

- 10.1. The President introduced the current state of this complex action based also on the decisions of the last meeting.
- 10.2. Joel Rochard (FRA), being the coordinator, presented the overall revision of the document based on the environmental aspects associated with sustainability aspects in the cellar.
- 10.3. Maximilian Freund (DEU) presented the document structure at version 3 and explained the inclusion of several details.
- 10.4. Franz Rosner (AUT) asked to consider the quantification of waste.
- 10.5. Juan Del Aguila (BRA) asked about what the current state of adoption of these sustainable approaches across the world is.
- 10.6. The President asked how long it will take to finalize the document, and the coordinator confirmed that there are still several months needed.
- 10.7. Antonio Graça (PRT) commented that this document will be a very useful follow-up to resolution OIV-VITI 641-2020.
- 10.8. The Secretariat informed about the next phases of the document progression until publication, by proposing to involve the head of unit oenology and two experts of Commission II for a revision on the aspects related to the oenological practices. The eWG5 will be reactivated to proceed with the document finalisation.

11. OIV/CIHEAM course "Sustainable Water and Soil Management for Resilient Viticulture" - Communication by OIV Secretariat

11.1. The Secretariat presented the joint training program organised by OIV with CIHEAM Zaragoza in the framework of the cooperation established between both Intergovernmental Organisations. The training will involve also SUSTAIN experts as lecturers and it will approach aspects relevant to the SUSTAIN work program.

12. Drafting the Exp. Col. Doc. Review of the latest climate change indicators - Presentation by the SUSTAIN Board

12.1. The President presented the review of the latest climate change indicators followed by a discussion.

12.2. Antonio Graça (PRT) asked for comments on possible effects from climate tipping points.

12.3. Juan Del Aguila (BRA) commented on currently observed climate change effects in Brasil. Asked about the most vulnerable regions of the world.

12.4. Aaron Fait (ISR) asked about the most pressing actions to adapt to climate changes.

12.5. Jacques Gautier (FRA) commented on the implementation of a strategy by France for the adaptation including foreign varieties and changing leaf/fruit ratios in cultivation practices and trellis systems. He also remarked the need to lower emissions and the difficulty of changing wine regions geographically as the grapevine is a perennial crop.

13. Methodologies review of WFP calculation for vineyards - Drafting the Exp. Col. Doc.

13.1. The Secretariat introduced the updated version of the document and the main questions addressed by the experts to the coordinator.

13.2. Kees Van Leeuwen (FRA), being the coordinator, presented the principles for a possible future resolution on water footprint calculation.

13.3. Aaron Fait (ISR) asked what the impact of alternative sources of water would be, like desalination water or wastewater for irrigation.

13.4. Andrea Pitacco (ITA) commented of the appropriateness of the hydrological model for northern Italy conditions.

13.5. Mario De la Fuente (ESP) asked what the next step in the work is and if it should not be worthwhile to validate the methodology across different countries using an OIV scholarship grant and an OIV request for data from member-states.

13.6. Antonio Graça (PRT), referring to "water is lost", remarked how semantics is important, as water is an emotional issue with public opinion. Water is finite on the planet, but not easily destroyed, it can however be blocked and transported. If transported or blocked in food or drink, it will be mostly used for human consumption. In grape production a lot more water is used locally than immobilized in the fruit. About the scale: should WFP be assessed locally (catchment), regionally, or nationally?

- 13.7. Fernando Alves (PRT) warned that if we do not evaluate the applicability of the three existing methods, a bias may be introduced in the work. Also indicated that the capacity of capturing and storing water should be considered.
- 13.8. The President suggested to reinforce the collective expertise document with few existent data from diverse environmental conditions which could be provided by the current study supervised by the coordinator. Afterwards, a decision should be made about moving towards a resolution on the subject.

14. Calculation of the CO2 footprint using the example of Austrian wine - Presentation by Dr. Franz Rosner

- 14.1. Dr Franz Rosner presented the system of the Carbon Footprint Calculation in the Austrian wine sector.
- 14.2. Antonio Graça (PRT) asked about application of reusable bottles to sparkling and imported wines.
- 14.3. Trinidad Marquez (ESP) asked about the distance between return facilities and reprocessing facilities of bottles.
- 14.4. Juan Del Aguila (BRA) asked about the contribution of the wine sector for the country's carbon neutrality.
- 14.5. Antonio Graça (PRT) asked why did the carbon footprint not consider distribution? Could the assessment in the interest of reusable bottles change?

15. Methodological recommendations for accounting for GHG balance in the vitivinicultural sector – Drafting the Exp. Col. Doc.

- 15.1. Mr. Andres Valero, being the action leader, presented the status of the first volume of several planned collective expertise documents and the next steps to draft the following volumes established in the work program.
- 15.2. The Secretariat informed about the document submitted to the editorial committee, and the second volume, which will be drafted from now on.

16. Revision of Resolution: OIV-CST-431 General principles of the OIV greenhouse gas accounting protocol for the vine and wine sector

- 16.1. The Italian Delegation presented a proposal of substantial revision of the resolution OIV-CST-431. To this aim a new draft Resolution is presented at step 1.
- 16.2. Antonio Graça (PRT) asked if a vineyard can last 50-years, should not its carbon be considered in the EP as 0.5 of what it would be if it lasted 100 years?
- 16.3. The Secretariat informed that a quick consultation will be made in the eWG11 and if approved the text will be sent to the member States for the official consultation.
- 16.4. The project of resolution moved from step 1 to step 3.

17. Revision of Resolution: OIV-CST 503AB-2015 Greenhouse gas accounting in the vine and wine sector – Recognized gases and inventory of emissions and sequestrations

- 17.1. The Italian Delegation proposed to withdraw this resolution since the main important aspects of this Resolution will be included into the new draft of resolution OIV-CST-431.
- 17.2. The Secretariat informed that the resolution can be withdrawn by the adoption of the revision of the resolution OIV-CST-431.

18. The INBIODYN trial at the Hochschule Geisenheim University (HGU) Presentation by Dr. Johanna Doering – Researcher at HGU (Germany)

- 18.1. Dr Johanna Doering presented the outcomes of the most important existing long-term experiment trial concerning the comparison of integrated, organic and biodynamic Viticulture.
- 18.2. Antonio Graça (PRT) asked why all amino acids were higher in concentration biodynamic and organic management compared to the integrated? Could flavanols infer less phenolic maturity?
- 18.3. The President highlighted that 4 out of the last 5 years were extremely dry and the biodynamic and organic managements performed better than the integrated.

19. The biodynamic practices and their certifications - Presentation by Adriano Zago – Founder and Director at Cambium Farm (Italy)

- 19.1. Mr Adriano Zago presented an overview on the biodynamic practices in viticulture and the existent certifications for biodynamically farmed vineyards and their produced wines.
- 19.2. Jacques Gautier (FRA) remarked that it would be important to make an assessment across the world of the references used, their differences, and the adoption levels.
- 19.3. Antonio Graça (PRT) asked why is the number of farms and hectares under biodynamic plateauing? Are these DEMETER world numbers?

20. Biodynamic practices: identification and application in viticulture - Drafting the Exp. Col. Doc.

- 20.1. The Brazilian Delegation presented the principles and the objectives of a new draft of a collective expertise document.
- 20.2. Michele Borgo (ITA) commented that plants have a natural ability to be stimulated for defences. Virus-infected plants have shown higher level of resistance against downy mildew. Welcomes a study that demonstrates the capacity of stimulated plants to defend themselves against diseases.

- 20.3. Juan Del Aguila (BRA) explained that in Brazil there are experts working in biodynamics who can contribute to this work but welcomes help from other countries having larger acreages of biodynamic vineyards.
- 20.4. Jacques Gautier (FRA) thanked Brazil for taking leadership and confirmed the availability to bring information relevant to the work of establishing a baseline regarding the mode of production.
- 20.5. The Group agreed to establish a new eWG under the coordination of the Brazilian Delegation.

21. Sustainable soil management in vineyards - Presentation by Dr. Paul Luu - Executive Secretaire 4p1000 Initiative

- 21.1. Dr Paul Luu presented an overview on the 4p1000 initiative and the main goals and focus areas, the strategic plan and the strategic objectives established by the cooperation with the OIV.
- 21.2. Antonio Graça (PRT) asked about the interactions of the initiative and the EU proposal for a Directive on soil monitoring and resilience. Furthermore, he asked if the periodicity proposed in the directive is adequate.
- 21.3. Andrea Pitacco (ITA) asked about the possibility of having clear and accurate results for certification. He underscored the difficulty of achieving the needed data to make the strategy actionable and reasonable for carbon storage pricing.
- 21.4. The President asked how can individual farmers achieve an adequate incorporation of carbon in soil if they do not have accessible advisory on what to do? He remarked that the increase in soil temperatures is not being included in models and it will speed up organic matter degradation and thus carbon losses.
- 21.5. The Secretariat informed that a new action on sustainable soil management in vineyards will be proposed in the coming months as a further enhancement of cooperation of OIV with 4p1000.
- 21.6. The President recalled his own article on the feasibility of 4p1000 including aspects of changing soil temperatures with climate change in Geisenheim.

22. Proposal of new works

- 22.1. The Brazilian Delegation proposed to develop measures for saving the heritage of wine regions across the world threatened by climate change.
- 22.2. The Portuguese Delegation supported the proposal to develop new OIV media initiatives (videos, podcasts a.o.) for disseminating all the work already done and published related to climate change or OIV issues in general. The delegation also reminded that the OIV was created to facilitate cross-border commercial exchanges through science-based normative work, therefore this work is at the core of the organization.



22.3. The Director General encouraged the development of two larger projects based on existing resources, resilience is probably a valid topic for this, and sustainability to become an overarching concept for the future of the wine sector.

23. Proposal of topics for the OIV Grants 2025

23.1. The Spanish Delegation suggested to support water footprint methodologies experimentation across different regions.

24. Any other business

24.1. The President of the SUSTAIN Group announced the end of the work of the current SUSTAIN board with the next spring meeting 2025 and thanked all for the work during the last 6 years.

24.2. After having invited the Experts for any other business, the President closed the 12th SUSTAIN Group meeting.

Date

Name and signature of the author of the proposal

03/04/2024

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