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LIFE-ADVICLIM project: Communication and Dissemination Activities

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► **To cite this version:**

Sophie Penavayre, Camille Picca, Hervé Quénol. LIFE-ADVICLIM project: Communication and Dissemination Activities. CNRS LETG. 2020. hal-04210618

HAL Id: hal-04210618

<https://hal.science/hal-04210618>

Submitted on 19 Sep 2023

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ADVICLIM



Communication and Dissemination Activities

Communication and Dissemination Activities

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The guidance manual can be found at <http://www.adviclim.eu/>

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Avril 2020



*With the contribution of the LIFE financial instrument of the European Union
Under the contract number: LIFE13 ENVFR/001512*

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FOREWORD

Across the earth, there is growing evidence that a global climate change is taking place. Observed regional changes include rising temperatures and shifts in rainfall patterns and extreme weather events. Over the next century, climate changes are expected to continue and have important consequences on viticulture. They vary from short-term impacts on wine quality and style, to long-term issues such as varietal suitability and the economic sustainability of traditional wine producing areas. As a result, the wine industry is facing many challenges, which includes adapting to these potential impacts, as well as reducing greenhouse gas emissions related to their activities.

In response to these challenges, the LIFE-ADVICLIM project has the objective to evaluate and develop local climate change

adaptation and mitigation strategies. The measurement network and web platform of this project seeks to inform and assist winegrowers on climate change impacts, on rational adaptation scenarios and on greenhouse gas emissions related to their practices at the scale of their vineyard plots. These technologies are evaluated in many European wine growing regions (Figure 1), namely Bordeaux and Loire Valley (France), Sussex (England), Rheingau (Germany), Cotnari (Romania) and Navarra/La Rioja (Spain). These six regions represent the climatic diversity of European wine, ranging from the Mediterranean to Oceanic and Continental climates.

For more information on this project, visit www.adviclim.eu.



Figure 1: Position of the six European wine growing regions that are studied in the LIFE-ADVICLIM project.

INTRODUCTION

Within the LIFE-ADVICLIM project, action D2: Communication and Dissemination Activities was intended to ensure a wide dissemination of the project findings to the following target groups: wine professionals, local authorities, academics and the general public. All the actions undertaken were aimed at achieving this objective. Our communication strategy was based on the use of communication tools in order to disseminate findings to the target groups aforementioned and reinforce networking among LIFE projects. In addition to this, dissemination actions towards scientific community were carried out such as: conferences, publications, seminars and workshops. Members of the project also made appearances in several medias: Tv, Radio, Internet, newspapers and science/wine magazines. This deliverable will summarize all of them and must be perceived as an attempt of reporting what have been achieved since the beginning of the project in 2015.

It contains all of the communication tools we managed to create as well as an evaluation of their impact.

SUMMARY

Communication and dissemination Actions	Achieved results
Web site:	
Number of visitors	10 000
Link to partners and stakeholder's websites	32
Leaflet	4 languages (English, French, German and Romanian)
Project presentation at international level	Project presentation in English
Newsletters	7
Notice Boards	15
Social network: Twitter	1 075 followers/165,5K impressions
Video report	4
Networking (participation in workshops with other LIFE projects)	4
Annual meetings, National workshops and professional days on pilot sites	9
Organisation of International conference	2
Dissemination toward scientific community	
Publications (scientific journal, book, ...)	26
Conferences	62
Colloquia and seminars (with seminar papers)	35
Scientific workshops	8
Media	
TV/Radio report	10
Documentary	2
Internet	10
National and international magazine	10
Local, regional and national newspaper	22
Story Map	All pilot sites

COMMUNICATION TOOLS

The graphic guidelines of the project were defined in January 2015 in order to give the project a visual identity. Since then, all of the communication tools created follow these guidelines with the intention of an harmonized communication.

Several communication tools have been created to inform the public, the wine profession and stakeholders.

- The website (www.adviclim.eu) informs the target public about the objectives of the project, the consortium (presentation of the partnership, role of each partner, partners' websites), the methodologies developed, results, news, announcements of events. Key documents for the public are also downloadable (presentations, brochures, deliverables, ...). The project and the different work packages have been translated into 4 languages (French, English, German and Romanian). A "Networking" section provides regular updates on collaborations with other LIFE projects and stakeholders (Figure 2). The total number of users as been established at 10 000 between 2015 and 2020 (Figure 3).
- A general presentation of the project with a 14-page Power Point.
- A leaflet, a poster and a Kakemono have been produced to present the objectives and partners of the project (Figure 4).
- 15 notice boards were installed at each pilot site (Figure 5 and 6).
- Social media: @LifeAdviclim on Twitter. More than 1 075 followers (Figure 7).
- Newsletters were produced and disseminated to stakeholders in order to give an overview of the progress of the project and news (events, results...) (Figure 8).
- Video reports introducing each action of the LIFE-ADVICLIM project (Figure 9). They are host on the french wine institute Youtube channel: VignevinFrance.
- The LIFE-ADVICLIM Story Map has been built in order to illustrate all the phases of the project. The Story Map is an interactive mapping tool. This pedagogical tool has been used during meetings with winegrowers and stakeholders (Figure 10).

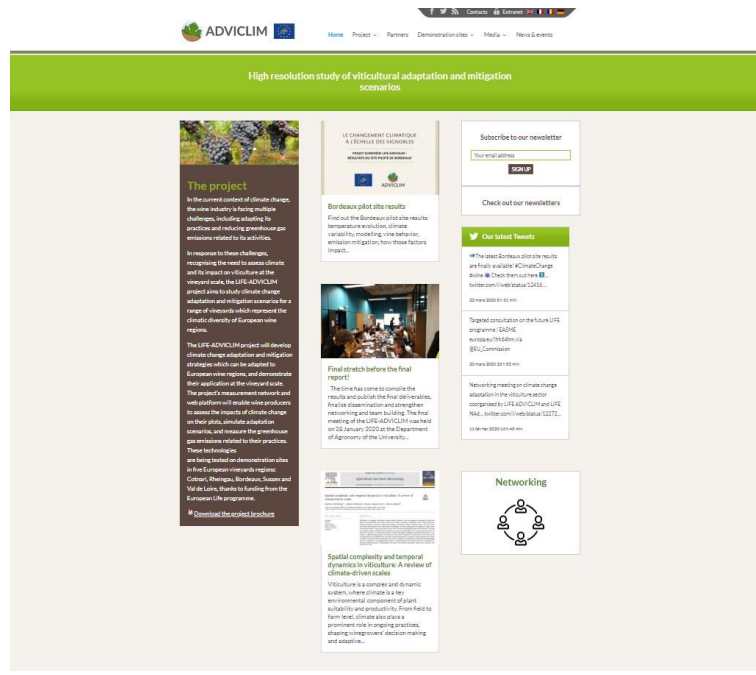


Figure 2: LIFE-ADVICLIM project website

Website data	From the 01/10/2015 to the 30/04/2020
Number of sessions	13943
Number of users	9099
Average time spent on the site	00:03:04
Total number of page seen	47 080
Average of page seen during one session	3,38
Percent of new visitors	86,4 %

Geographical origin of the ten top users (by number of session)	Number of sessions
France	5 707
United States	1 082
United Kingdom	1 053
Romania	572
Spain	524
Germany	476
Russia	449
Italy	427
New Zealand	370

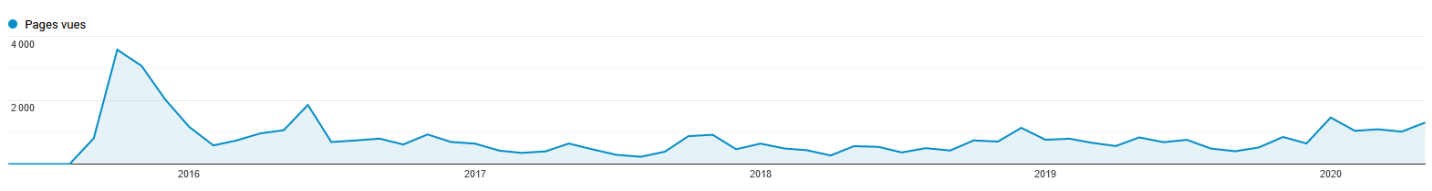


Figure 3: LIFE-ADVICLIM website: Audience overview, audience locations and pages seen.

ADAPTATION OF VITICULTURE TO CLIMATE CHANGE

ADVICLIM

High resolution observations of viticultural adaptation & mitigation scenarios

In a climate change context, and facing the statement of the necessary inclusion of the climate at a fine scale and its consequences on the viticulture, the LIFE-ADVICLIM project aims to study adaptation and mitigation scenarios, at the terroir wine growing scale, for different vineyards representative of the climatic diversity of the European wine-growing regions. In order to demonstrate the interest of a local management of the adaptation and mitigation strategies, the LIFE-ADVICLIM project develops technologies adaptable to the European wine growing terroirs: a measurement network and a web platform which will allow the winegrowers to assess the impacts of the climate change on their plot, to simulate adaptations scenarios and to measure the greenhouse gas emissions linked to their practices. Those technologies are experimented on demonstration sites, in five European vineyards, thanks to the Life funding: Cotnari, Rheingau, Bordeaux, Sussex and Val-de-Loire.

The partners

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With the contribution of the LIFE financial instrument of the European Union LIFE13 ENVFR/001512

THE DEMONSTRATION SITES IN EUROPE

ADVICLIM

Bordeaux

90 temperature sensors installed in the famous areas of Saint-Emilion & Pomerol to model temperature at fine scale. Vine phenology and grape ripening are monitored to better understand the influence of spatial temperature distribution on vine behaviour and wine quality.

Val de Loire

The wine producing areas of the Coteaux du Layon and Saumur Champigny are equipped with a network of agro-environmental measurements at local vineyard levels. These two areas, producing respectively dry or sweet white wines and red or rosé wines, are representative of the contrasting landscape and geo-pedological features of the Loire Valley.

Sussex

Rock Lodge Vineyard, located in West Sussex (UK) was established in 1964 and, at 8 hectares, is Plumpton College's largest vineyard. The vineyard is very representative of cool climate viticulture, hosting a range of grape varieties for the production of sparkling, white, rosé and red wines.

Rheingau

The Rheingau wine-growing region is located at the 50th degree latitude north and is famous for their well-known Riesling wines. Due to the gradient within such steep slope vineyards as well as management practices meso-climate varies and impacts on wine quality. Hence a network of agro-meteorological sensors is installed in a steep slope area of ca. 175 ha near Rüdelsheim.

Cotnari

Within the Life ADVICLIM Project, the Cotnari vineyard represents the viticulture of the temperate continental climate zone. This vineyard is located in the north-eastern part of Romania and produces white wines. Spatio-temporal variation of the local thermal regime will be monitored through 20 sensors installed within the vineyard area.

Figure 4: LIFE-ADVICLIM leaflet

Adaptation des pratiques viticoles au Changement Climatique : analyse et modélisation à haute résolution

ADVICLIM

Projet LIFE ADVICLIM

Saint-Emilion & Pomerol

Enjeux

Face au contexte de changement climatique actuel, le terroir viticole doit relever les défis, non seulement de l'adaptation de ses pratiques, mais également de l'atténuation des émissions de gaz à effet de serre liées à ses activités.

Objectifs

Répondant à ces enjeux et face au constat de la nécessité prise en compte, à une échelle fine, de la variabilité du climat et de ses conséquences sur la viticulture, le projet LIFE-ADVICLIM a pour objectif d'étudier des scénarii d'adaptation et d'atténuation, à l'échelle des terroirs viticoles, pour différents vignobles représentatifs de la diversité climatique des régions viticoles européennes.

Méthode

Afin de démontrer l'intérêt d'une gestion locale des stratégies d'adaptation et d'atténuation, le projet LIFE-ADVICLIM développe des technologies adaptables aux terroirs viticoles européens : un réseau de mesure et une plateforme web qui permettent aux viticulteurs d'évaluer les impacts du changement climatique sur leurs parcelles, de simuler des scénarii d'adaptation et de mesurer les émissions de gaz à effet de serre liées à leurs pratiques. Ces technologies sont expérimentées sur des sites de démonstration situés cinq vignobles européens grâce au financement LIFE : Cotnari, Rheingau, Bordeaux, Sussex et Val-de-Loire.

Description du projet

La majeure partie de la région viticole du Libournais Est, qui couvre une superficie de 12 500 ha de vignes, répartie en 8 appellations, a été choisie dans le cadre de ce projet pour une étude de micro-climat. Cette région, qui présente un environnement naturel diversifié, est propice à ce type d'étude.

Sur ce territoire, 50 capteurs de température enregistrent toutes les heures la température minimale et maximale. Ces capteurs ont été positionnés en tenant compte des paramètres environnementaux qui influencent la température à cette échelle : altitude, exposition, pente, distance à l'agglomération de Libourne, aux mises de cette zone (Dordogne, Barbanne...), type de sol, latitude, longitude.

Les objectifs de ce projet sont les suivants :

- Produire des cartes très précises du micro-climat pour étudier la variabilité des températures dans la zone étudiée
- Mesurer la réaction de la vigne à ces variations climatiques, en suivant le développement végétatif et la maturation des raisins sur un réseau de parcelles
- Modéliser les dates de la floraison et de la véraison
- Prévoir les conséquences du changement climatique, sur développement de la vigne, pour mieux cibler les adaptations viticoles nécessaires (cépage, ports-griffes, conduits de la vigne...).

www.adviclim.eu
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« Avec la contribution de l'instrument financier LIFE de l'Union Européenne »

Coord. M. LIFE 13 ENVFR 001512

Figure 5: Notice Board of Saint Emilion/Pomerol



Figure 6: Notice Boards installed on the pilot sites: a- Cotnari; b-Geisenheim; c-Saint Emilion/Pomerol; d- Rock Lodge; e- Loire Valley.

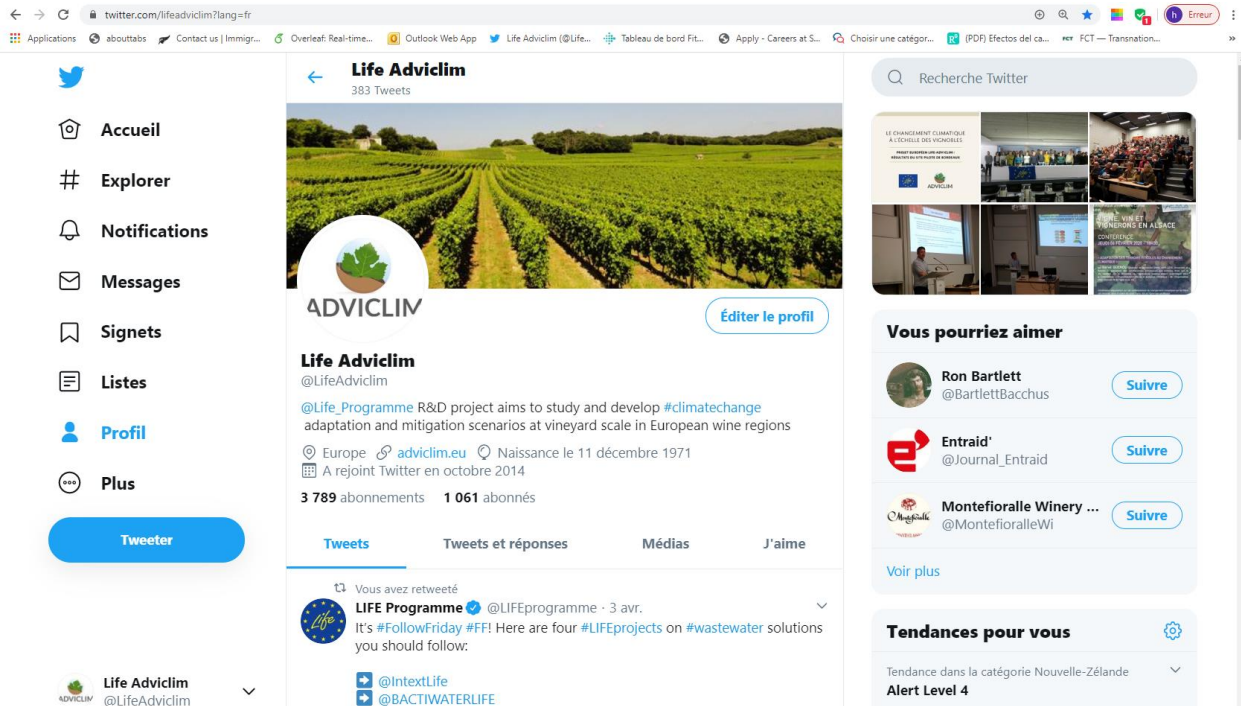


Figure 7: @LifeAdviclim on Twitter: 1 075 followers and 165,5K impressions

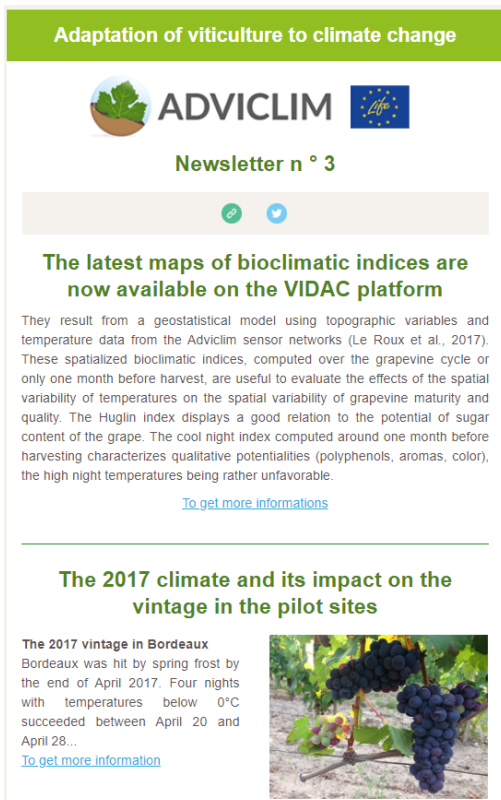


Figure 8: LIFE ADVICLIM Newsletters n°3 and 5

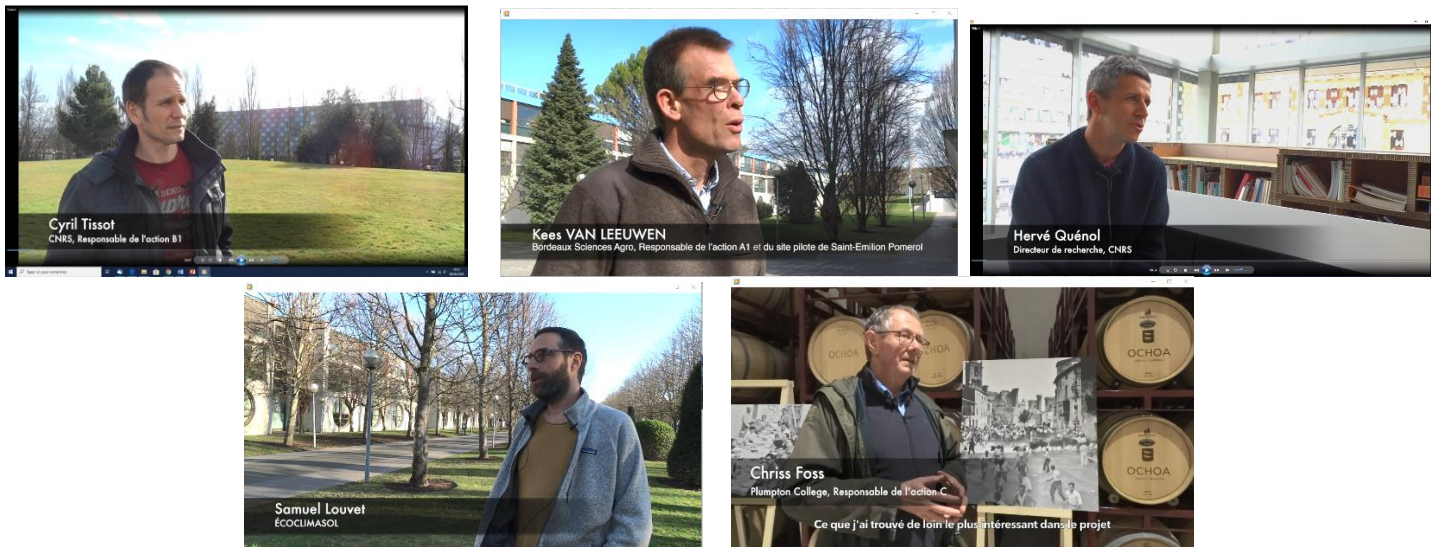


Figure 9: Video report describing each Action of the LIFE-ADVICLIM project

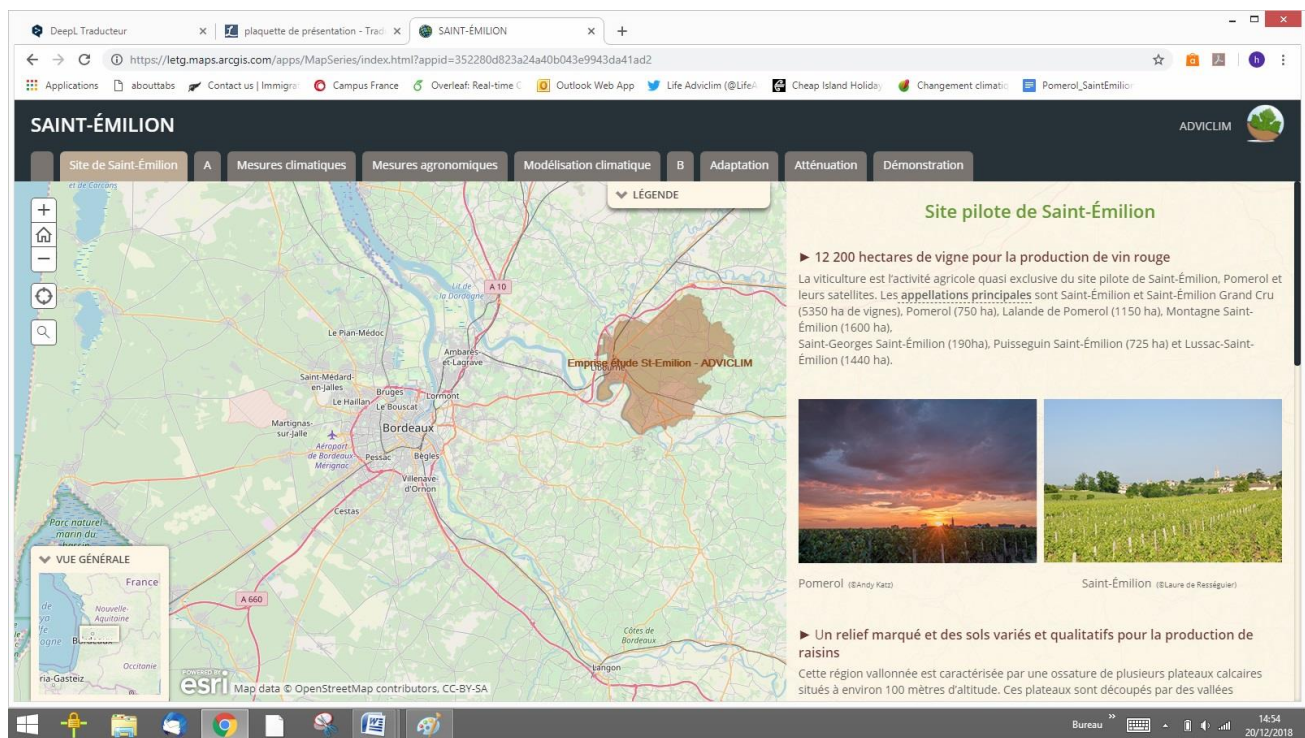


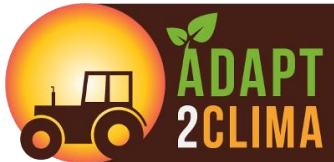
Figure 10: Example of the Story Map for Saint Emilion/Pomerol pilot site

NETWORKING

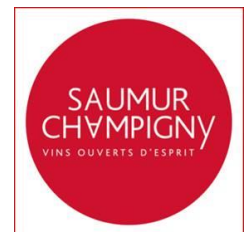
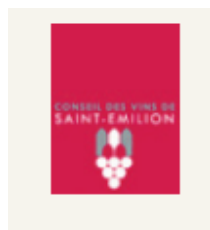
Networking has been developed with others LIFE, H2020 and ER4CS European projects and different stakeholders (local, national and international).

The networking strategy was implemented by:

- Social media: more than 80 followers in *ADVICLIM Twitter* from European projects (+50 from LIFE projects; +30 from H2020 and ER4CS projects (Figure 11)).
- A private stakeholder's matrix: an excel file available in the *adviclim.eu* private section that contains information from all of the project partners: name, specific interest on the project, social media accounts, person from the represented organization to contact.
- Networking section in Websites: our main partners and stakeholders are presented in the Networking section of the website. The LIFE-ADVICLIM project is also listed on the websites of other LIFE projects (Figure 11).
- Newsletters: an article of the ADVICLIM newsletter n°6 is dedicated to the networking *adviclim's* site section (Figure 8) and newsletter n°6 of the LIFE project *Vineyard4heat* mention the ADVICLIM project.
- Participation and organisation of workshops/seminars with other LIFE projects (Figure 12). During the LIFE-ADVICLIM final meeting, a Networking meeting on climate change adaptation in the viticulture sector co-organised by LIFE ADVICLIM and LIFE NAdapta. Participation of LIFE-ADVICLIM, LIFE-PRIORAT-MONSANT, LIFE-SARMIENTO, LIFE-CLIMAVIT21, LIFE-NAdapta, POCTEFA VITISAD and POCTEFA VITES QUALITAS projects (Figure 13).



a)



b)

Figure 11: European projects partners of the LIFE ADVICLIM project (a) and examples of international, national and local stakeholders (b).



Mr. **Luis Gonzaga Santesteban** (LIFE ADVICLIM) presented the project “Adaptation of Viticulture to Climate change: High resolution observations of adaptation scenarios for viticulture” - LIFE ADVICLIM. He first explained how crop failure (with also implications on wine quality) in specific vineyard areas of Spain is possibly related to the unsuitability of the currently used vine varieties and pruning systems, and to the selection of inappropriate plantation sites, which are increasingly affected by climate change. Therefore, the project is investigating the possibility to re-introduce traditional and indigenous vine varieties which typically show higher adaptation potential to local dry conditions. Also, new tree training systems are being investigated, while taking into account the farmers’ traditional knowledge. The project will then develop tools and climate models to identify the best responses to mitigate and locally adapt to the impact of climate change in Mediterranean vineyards.



a) *LIFE Platform Meeting on Climate Change Adaptation in Agriculture and Forestry in the Mediterranean Region Madrid, 13-14 March 2018*



Jornada de Networking con el LIFE ADVICLIM y LIFE PRIORAT+MONSANT

JUNIO 4, 2018

El día 31 de mayo, tuvo lugar en Bullas la jornada de networking con los proyectos LIFE de vitivinicultura LIFE ADVICLIM y LIFE PRIORAT+MONSANT...

[leer más](#)

b) *LIFE SARMIENTO in Bullas (Spain), 31st May 2018: LIFE Networking Day Adaptation of Viticulture to Climate Change. Networking day with LIFE SARMIENTO, LIFE PRIORAT+MONSANT and LIFE-ADVICLIM*

Figure 12: Participation of the LIFE-ADICLIM project in Networking days.



Networking meeting on climate change adaptation in the viticulture sector coorganised by LIFE ADVICLIM and LIFE NAdapta

11-02-2020

On occasion of the LIFE ADVICLIM final meeting held in Navarra between the 28th and 30th January 2020, a networking session was organised in collaboration with LIFE NAdapta ([Agenda](#)). The meeting gave the opportunity to present the participant projects on climate change adaptation in the agricultural sector, and more specifically in the viticulture sector (LIFE ADVICLIM, LIFE PRIORAT-MONTSANT, LIFE SARMIENTO, LIFE MEDACC, LIFE EBRO-ADMICLIM, LIFE MIDMACC, LIFE CLIMAVIT 21, LIFE NAdapta, POCTEFA VITISAD, POCTEFA VITES QUALITAS) to the 35 attendants. Adaptation and mitigation strategies and impact indicators were discussed among participants and experiences and best practices were shared in 3 round tables.

Presentations:

- LIFE ADVICLIM, Hervé Quénel
- LIFE PRIORAT-MONTSANT, Mario de la Fuente
- LIFE SARMIENTO, Meissa Garcia
- LIFE CLIMAVIT21, Xavier Aranda y Felicidad de Herralde
- LIFE NAdapta, Delia Sola
- POCTEFA VITISAD, Ana Aizpurúa
- POCTEFA VITES QUALITAS, Gonzaga Santesteban y Diana Marin

<https://lifenadapta.navarra.es/en>

Pictures of the meeting are available in the [Pictures Gallery](#)

NOTICIAS

Figure 13: Networking session organised in collaboration with LIFE NAdapta during the LIFE ADVICLIM final meeting, Pampelona (Spain) on the 29th of January 2020.,

WORKSHOPS AND MEETINGS

Several workshops and meetings were held during the project. The aim of these events was to show the progress of the project but also to present the tools and results to wine professionals and stakeholders. Workshops with the winegrowers of the pilot sites were also organised in order to build our models and to validate our results. These meetings with winegrowers were very important, particularly for developing climate change adaptation scenarios. The LIFE-ADVICLIM project team also participated in the organization of scientific symposia and the final meeting that took place in Pamplona from 28 to 30 January 2020.

- Annual consortium meetings at each pilot site: Kick-off meeting in Rennes (France) on the 21st-22nd July 2014; Brighton (UK) on the 15th & 16th of June 2015; Bordeaux (France) on the 14th & 15th 2016; Geisenheim (Germany) on the 18th and 19th of May 2017; on 6 and 7th of September 2018 Iasi (Romania). These annual meetings made it possible to visit the various pilot sites and, in some cases, to meet the winegrowers involved in the project.
- National workshops and professional days were held on several pilot sites. In France, these workshops were conducted in collaboration with INRA's LACCAVE 2.21 project, whose objective is to develop climate change adaptation strategies for each French wine-producing region. In November 2018, a local meeting of winegrowers and other stakeholders was held in Saint-Emilion to present and validate the results obtained on the local pilot site. This workshop was a great success, with more than 200 participants (please see **Box 1**). The INRA Bordeaux team organised other technical days with winegrowers in other Bordeaux wine appellations (e.g. Fronsac, ...) and with other winegrowing organisations (e.g. viticultural colleges, cooperatives, winegrowing unions, etc.). A professional day in the Val de Loire was held during the regional meeting on adapting viticulture to climate change, organised by *TechniLoire* and *INRA* (March 2019). This meeting was held as part of the *LACCAVE 2.21* prospective work on defining adaptation strategies to various climate outcomes. Around 80 wine actors of the Loire Valley attended this meeting. During the final meeting, a technical day was held with the winegrowers of Navarre and La Rioja. The workshop gathered 100 winegrowers and stakeholders, which shows the interest of local actors in the research findings and the importance of the dissemination action. The research topic transferred to winegrowers included adaptation tools (on vineyard management, plant material and cultivation practices - canopy management and irrigation). The day ended with a round table with local winegrowers and discussions on the importance to combine adaptation and sustainability (please see **Box 2**).
- Participation in the organization of the International symposium CLIMWINE “*Sustainable grape and wine production in the context of climate change*”,

Bordeaux, April 10-13, 2016. “Scientists from 20 different countries came to Bordeaux from April 11 to 13 2016 to present their work related to climate modeling, impacts on vines and wines, possible adaptations at different scales, and socio-economic outputs. This symposium was also an important opportunity not only to exchange among researchers, but also with representatives of the industry” (Climwine, 2016). Visits and meetings between winegrowers and scientists were organised on the Saint Emilion-Pomerol pilot site. A book of proceedings was published as a result of this international symposium (Figure 14).

- The final meeting of the LIFE-ADVICLIM was held from 28 January to 30 January 2020 at the Department of Agronomy of the University of Pamplona gathering the different action leaders, some researchers involved in the project, some members of the Advisory Board (please see **Box 2**).

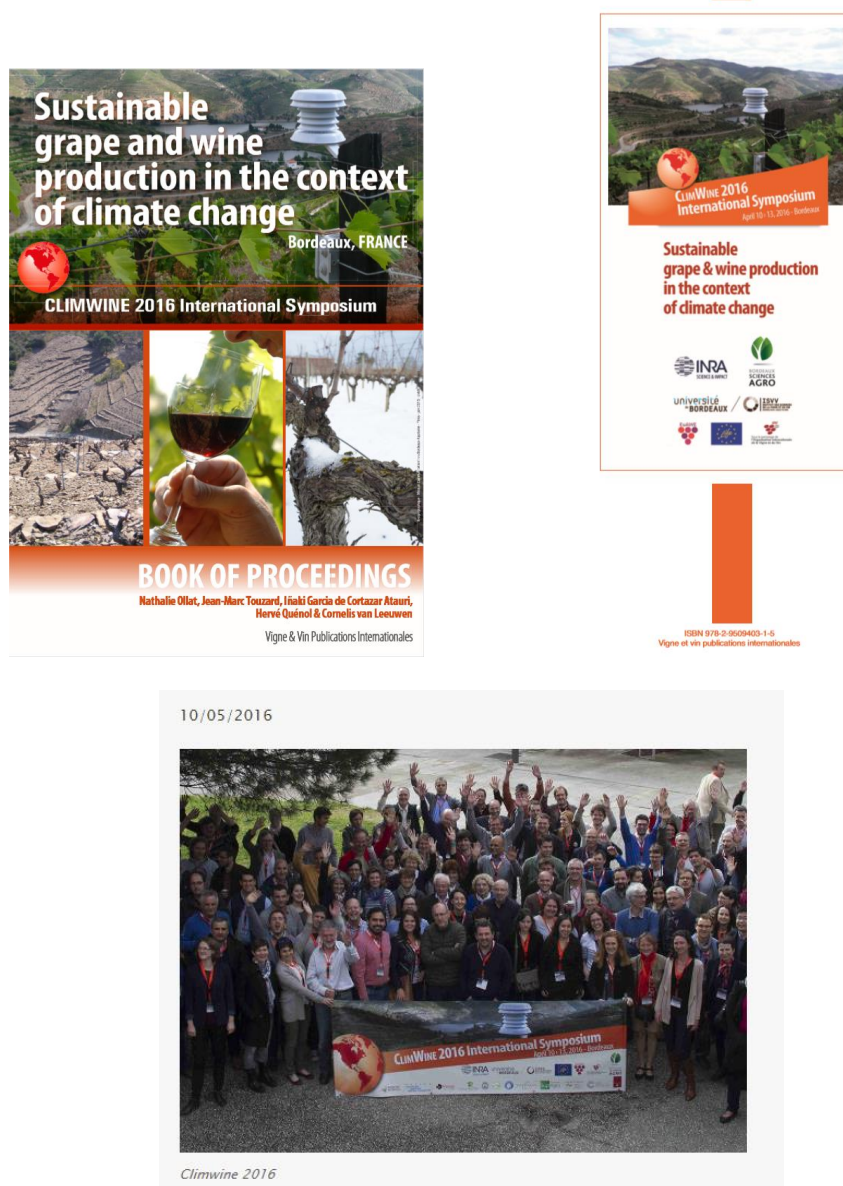


Figure 14: International symposium “Sustainable grape and wine production in the context of climate change, Bordeaux, April 10-13, 2016

Box 1.

LIFE ADICLIM meeting for winegrowers in the Saint-Emilion– Pomerol pilot site (November 12, 2018), by INRA/BSA Team

On November 12, 2018 a meeting on the Life ADVICLIM project has been scheduled in the Saint-Emilion – Pomerol pilot site. The main objective was to inform the wine growers of the area about the progress of the Life ADVICLIM project. The meeting was organized in the “*Lycée Agricole de Libourne – Montagne*”. This community college is located inside the pilot site and trains future wine professionals (enologists, viticulturists and wine trade managers). They own the largest amphitheater in the area (200 places) and appropriate facilities for meetings, including sound and video equipment, a sound engineer and the possibility to organize lunch and wine tastings. The meeting was a great success. It was planned to launch the invitations in three-time series: first to the winegrowers and consultants of the pilot site area as well as a selected group of scientists and students, second to winegrowers from surrounding appellations and third to other winegrowers of the Bordeaux area. It turned out that after the first round of invitations, the number of registrations corresponded roughly to the capacity of the amphitheater. Because there is no bigger venue in the area it was decided not to launch the second and third round of invitations. Instead, it is planned to organize meetings for winegrowers in surrounding appellation early 2019. Contacts have already been established with the association of winegrowers of the *Fronsac* appellations (which are located West of the pilot site) and later contacts will be taken with the growers’ association of the *Côtes de Castillon* appellation (East of the Pilot site). Finally, 186 people attended the meeting, including 61 % winegrowers, 12 % consultants, 16 % scientists and 5 % students. The meeting was organized over the whole day, starting with a welcome coffee. Lunch was offered to the participants in the form of a cocktail, allowing winegrowers to network and exchange with the scientists working on the Life ADVICLIM project. During the lunch break, a winetasting was offered and included a flight with 3 wines from the same producer (château Franc Le Maine, Saint-Emilion Grand Cru) over three vintages: 2012, 2013 and 2014. Climate information on these vintages was provided, allowing delegates to relate the taste of the wine to the climatic conditions of the vintage. Other wines were presented to show the impact of the spatial temperature variability over the area on wine sensory attributes. All the wines were offered by the growers. A detailed printout of the program was provided, including a description of the Life ADVICLIM project. Furthermore, two full text papers related to the presentations and a flyer presenting the major effects of climate change on viticulture and wine quality were distributed to the participants as take-home information. A journalist of a local newspaper (*Le Résistant*) was invited and covered the event with a very detailed paper. 12 oral presentations were scheduled, ranging from 10 to 40 minutes depending on the topic. Substantial time was allocated after each presentation to answer questions from the audience. The abundance of questions allowed highly interesting interactions between the presenting scientists and the local winegrowers.



Lycée Agricole de Libourne – Montagne

Box 2.

LIFE ADICLIM final meeting at the *Public University of Navarre (UPNA)* in Pampelona (Spain), by Advisory Board members

The final meeting of the LIFE-ADVICLIM was held from 28 January to 30 January 2020 at the Department of Agronomy of the *Public University of Navarre* in Pamplona gathering the different action leaders, some researchers involved in the project, some members of the Advisory Board as well as a European Union Commissioner for LIFE projects. Each action leaders presented the corresponding action results to the participants, displaying the work progress before the final report issue. A massive work was carried out and was gradually disseminated to the stakeholders.

Day 2 on 29 January 2020 was dedicated to a networking meeting hosted by the Department for Rural Development and Environment of the government of Navarra in Pamplona. Various LIFE projects, including ongoing and/or finished projects, conventional or integrated projects related to adaptation of viticulture to climate change were presented. Keeping in mind that the final objective of LIFE projects is research transfer to help policies making, feedback on the various experience was shared between different LIFE projects leaders and researchers involved in various Interreg and LIFE projects carried out in Navarra and Spain. It led in interesting discussions on how the different projects can contribute to policy making at different scales levels and how to encourage winegrowers to be part of the processes of policy making.

The day ended with the visit of two wine estates in La Rioja which collaborates with the Department of fruit production of the University of Navarra in the framework of the LIFE-Adviclim project.

Finally, a technical day took place on 30 January 2020 at the *Estación de Viticultura y Enología of Navarra (EVENA)*. The workshop gathered 100 winegrowers and stakeholders, which shows the interest of local actors in the research findings and the importance of the dissemination action. The research topic transferred to winegrowers included adaption tools (on vineyard management, plant material and cultivation practices - canopy management and irrigation). The day ended with a round table with local winegrowers and discussions on the importance to combine adaptation and sustainability.



LIFE ADVICLIM team at the UPNA



Technical day with the winegrowers of Navarre

DISSEMINATION TOWARD SCIENTIFIC COMMUNITY

ADVICLIM's partners and members have participated in many scientific events such as conferences, symposia, workshops and seminars at national and international levels.

The objectives, methodologies and results of the LIFE-ADVICLIM project have been presented in the main international scientific events on climate change, agriculture, vine and wine: *World Congress of Vine and Wine (OIV)*, *International Terroir Congress*, *COP21 in Paris 2015*, *GIESCO*, *AMOS-ICSHMO*, *European Geosciences Union General Assembly*, *International Symposium of Oenology, Agriculture and Climate Change-Adapting Crops to Increased Uncertainty*, *UNESCO*, *Climate Smart Agriculture*, *CLIMWINE Symposium*, *Meteorological Society of New Zealand*, *AIC*, *Exposition Universelle de Milan...* (Figure 15 to 17).

Members of the LIFE-ADVICLIM project have been invited as guest speakers to present the project at many events in Europe (France, Spain, Italy, Romania, Germany, England, Switzerland, ...) and internationally (Argentina, Brazil, Chile, Uruguay, China, New Zealand) (Figure 18 to 20).

Two PhD theses have been produced in the framework of the LIFE-ADVICLIM project and numerous scientific articles and book chapters have been published in international journals (Figures 21 and 22).

- **Publications:** 16 papers in scientific journals; 10 books and books chapters.
- **Conferences:** 36 presentations at national and international conferences and 26 project presentations.
- **Colloquia and seminars (with seminar papers):** 25 seminar papers and 10 seminar presentations.
- **Scientific workshops:** Organization and participation in 8 workshops in Europe, Argentina and New Zealand.

Highlights: scientific events and publications

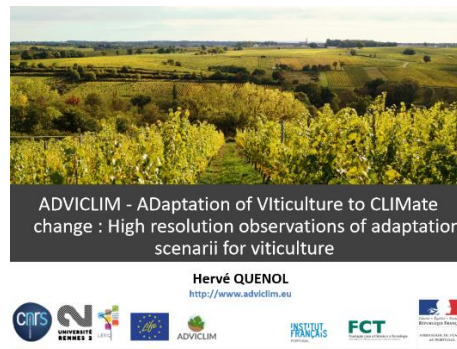


Figure 15: Presentation of LIFE-ADVICLIM at the French Embassy in Portugal for European PRIMA program (Partnership for Research and Innovation in the Mediterranean Area)

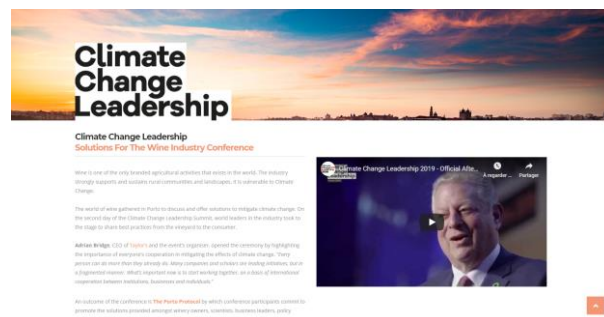


Figure 16: LIFE ADVICLIM at “Climate Change Leadership, Solutions for the Wine Industry” in Porto, 5th-7th March 2019, organized by Vice President Al Gore



Figure 17: LIFE ADVICLIM at the 41st World Congress of Vine and Wine (OIV), Geneva, Switzerland, 15th-19th July 2019



Figure 18: Conference and technical visit at “New Zealand Winegrowers Research Institute” on 30th October 2018 in Blenheim (NZ)



Figure 19: Conference at Colmar University, on February 6th, 2020 in Colmar (France)



Figure 20: Presentation of LIFE-ADVICLIM project at Tsinghua University in November 2018



Figure 21: Doctoral thesis of Etienne Neethling (a) and Renan Le Roux (b)

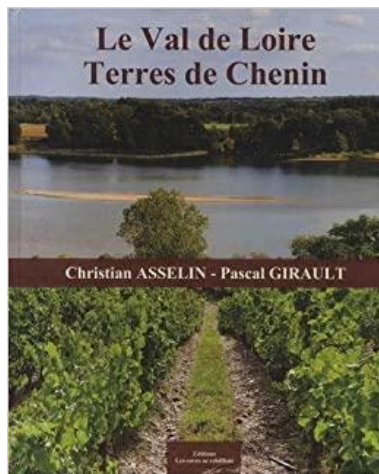
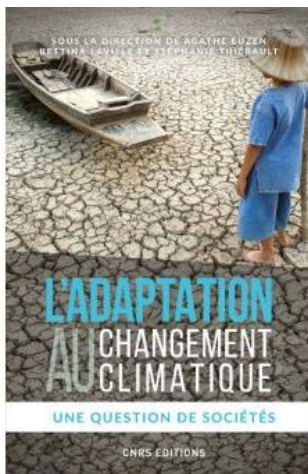


Figure 22: Examples of scientific articles and book chapters

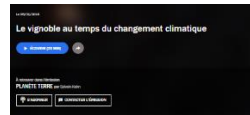
DISSEMINATION BY MEDIA

The LIFE ADVICLIM project and its results have been presented in different types of media: TV, Radio, documentaries, general and specialised websites on vineyards and wines, regional, national and international newspapers. The dissemination of the LIFE-ADICLIM project was carried out by the media in the European countries of the project (France, Germany, Romania, England and Spain) but also in other countries (Argentina, New Zealand, ...).

The results of the LIFE-ADVICLIM project were regularly presented in wine magazines. For example, the "*Revue de Œnologues*" published several papers on LIFE-ADVICLIM throughout the project in order to present the evolution of the project and the main results between 2015 and 2019. These papers were published in the national and regional editions concerning the project (Bordeaux Region and Val de Loire Region).

- **TV/Radio report:** 10 shows or interviews (Figures 23 and 24)
- **Documentary:** 2 documentaries (52mn) (Figures 25)
- **Internet:** 10 articles on websites specialized in viticulture or news websites (Figures 26 to 30)
- **Science and Wine magazines:** (Figures 30 to 36)
- **Local, regional, national and international newspaper**

Highlights: Media



“Le vignoble au temps du changement climatique”, « Planète Terre » broadcast on national France Culture channel, on 6th January 2016

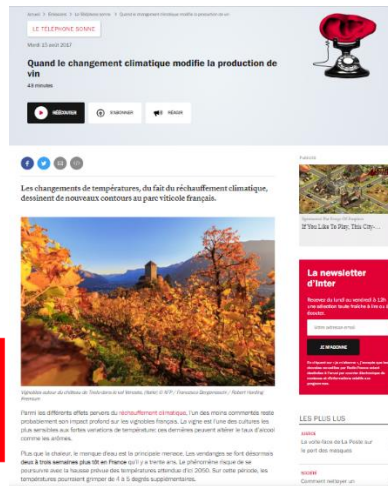


La culture du vin s'est exportée sur les six continents malgré les différences climatiques; puis nous serons à l'écoute de l'appel des terres sauvages, dans les steppes sibériennes

Les traditionnelles cultures à étages de la vigne dans les domaines français voit naître des techniques cousines plus éloignées dans les six continents. Le goût pour le vin s'exporte autant que les pieds de vignes qui poussent désormais à très haute altitude en Argentine, malgré des hivers rudes en Chine, en Inde, au Maroc, ou encore en Afrique du Sud... Hervé Quénet est géographe et a parcouru la terre pour surveiller l'impact du climat sur la vigne. Quelques degrés de plus, c'est souvent quelques degrés de trop pour cette culture fragile.

On retrouve Hugo Combe pour la Chronique culturelle Bouillon de culture autour de l'élixir vermeille, en partenariat avec la Revue Reliefs.

“Dans les vignes du monde”, « Le temps d'un bivouac » broadcast on national France Inter channel, on 11th July 2016



LE TÉLÉPHONE SONNE
 Mercredi 23 août 2017
 Quand le changement climatique modifie la production de vin
 44 minutes

Les changements de températures, du fait du réchauffement climatique, dessinent de nouveaux contours au paysage viticole français.

Plus que le vin, le message d'eau est le principal message. Les vendanges se font désormais deux à trois semaines plus tôt en France qu'il y a trente ans. Le photovoltaïque aide de sa puissance à la hausse plutôt des températures attendues d'ici 2050. Sur notre planète, les températures pourraient grimper de 1 à 5 degrés supplémentaires.

“ Quand le changement climatique modifie la production de vin ”, « Le téléphone sonne » broadcast on national France Inter channel, on 15th August 2017

Figure 23: LIFE-ADVCLIM on national Radio channels



“ *Changement climatique et vignobles de Saint Emilion : le projet LIFE ADVICLIM* ”, « *Télématin* » broadcast on national TV France2, on 18th April 2015



“ *Les vins français sont-ils en danger ?* ”, « *La Quotidienne* » broadcast on national TV France5, on December 2015



TV interview to talk about the issue of adapting viticulture to climate change on a national TV France 3, on November 2018.

Figure 24: LIFE-ADVICLIM on national TV channels

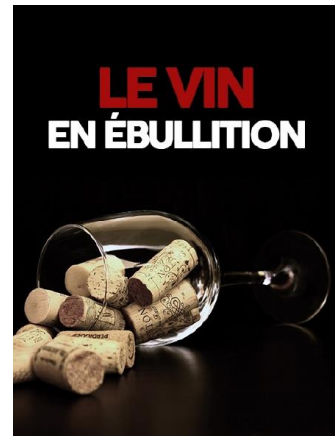


Figure 25: LIFE-ADVCLIM on video documentary: « Le vin en ébullition », (52mn), Écomedia, France 5, Ushuaïa TV, September 2017

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Climate change: the next frontier

26 September 2017

Some areas of Chile and Argentina are experiencing changes in the frequency and severity of weather extremes. While many winemaking regions struggle to adapt, there are some visionary producers who see it as an opportunity to explore. Amanda Barnes investigates.



Above: severe forest fires were the result of the extreme heat in Chile in early 2017. Here the flames are on the other side of the hills, adjacent to a plot of 200-year-old País vines belonging to Viña González Bastías in the dry lands of Maule. Photographer: Daniela Lorenzo Bürger

The wine map is undeniably changing. The worldwide phenomenon of climate change is creating new, once-unimaginable wine regions, while at the same time dismantling others in its path. The oxymoron is, of course, that it poses both distressing risk and thrilling opportunity for

Figure 26: LIFE-ADVCLIM in Web: "Climate change: the next frontier", Decanter, 1er juillet 2017.

The EU climate change initiatives impacting wine

Friday, 11. January 2019 - 11:00



Even a brief look at EU policy documents should swiftly scotch doubts about climate change, if any linger after US President Donald Trump's June 2017 withdrawal from the Paris Agreement. Support for carbon reduction and other environment-friendly initiatives abound in EU policy, some dating back to 1990s, along with a range of subsidies and other supports for the bloc's 16 wine producing countries. Making sense of wine and climate change policy, however, can take time.

Figure 27: LIFE-ADVICLIM in Web: "The EU climate change initiatives impacting wine", Wine Business International, January 2019



Hervé Quénoel: La connaissance du climat local est primordiale. Il faut une viticulture de précision, qui permette à chacun de déterminer quels sont les meilleurs lieux pour planter la vigne. On s'aperçoit, par exemple, que les zones traditionnelles de mi-coteau, très ensoleillées, ne sont peut-être plus les meilleures; dans certains cas, on aurait intérêt à planter plus bas dans les secteurs les plus septentrionaux. En Argentine, en raison de la fonte des glaciers des Andes, l'eau manque et les vignerons cherchent la fraîcheur en altitude, sur les premiers versants de la Cordillère, et même jusqu'en Patagonie ou à la frontière bolivienne!

Olivier Poussier: Troisième piste, la plus essentielle, d'après moi: le choix des cépages. Il est nécessaire de remettre au goût du jour certains cépages autochtones, qui ont été abandonnés pour des raisons diverses, parce qu'ils étaient peu aromatiques, difficiles à cultiver... Il serait intéressant de trouver des variétés qui arrivent à maturité complète sans excès d'alcool.

Hervé Quénoel: À l'échelle mondiale, on utilise principalement et majoritairement une dizaine de cépages, seulement. Il faut diversifier. Utiliser des variétés plus tardives, résistantes à la sécheresse, aux maladies. Et varier les porte-greffes, également, qui sont les plans soutenant les pieds de



**CLIMATOLOGUE
HERVÉ QUÉNOEL**

Climatologue et directeur de recherche au CNRS, spécialiste de la viticulture, Hervé Quénoel étudie notamment l'impact du changement climatique à l'échelle locale et coordonne le projet européen Life-Adviclim (une trentaine de vignobles sur 15 pays).

Figure 28 : LIFE-ADVICLIM in Web : "Climat : le vent du changement", Vente à la Propriété, n°8, 2018

Two Producers Working to Protect the Future of Wine

BY LINDSAY PATTERSON



Solar panels help Jackson Family Wines reduce their greenhouse emissions. / Photo courtesy of Jackson Family Wines

When Miguel A. Torres, the 78-year-old patriarch of Familia Torres, is asked about the worst case scenario from climate change, he doesn't talk about the future of wine. Instead, he reaches slowly into his coat jacket pocket and pulls out a stack of papers. He carefully unfolds a sheet he's carried for the past decade. Its well-worn

one in Chile and another in California, has led the charge for the country's wineries to reduce their contributions to greenhouse gas emissions and adapt to new climate realities.



A Familia Torres vineyard in Brno, Catalonia. / Photo courtesy of Familia Torres

Climate change poses serious challenges for wine growers. "With continued warming, it may be hard to continue growing grapes in some regions," says Dr. Elizabeth Wolkovich, an ecologist at The University of British Columbia. Through her research on European vineyards, she's found that harvest time is coming two to three weeks earlier than during the 1980s. Every stage of the vine growth cycle is shifting, from budburst to ripening, opening vineyards to vulnerabilities like frost and drought. These conditions trickle down into taste, aroma, alcohol content and general wine quality.

The map of where we get the best wines might be redrawn over the next few decades.

"The biggest sign [of climate change] is the emergence of new wine-growing regions, and more difficult climatic conditions for traditional wine-growing regions," says Hervé Quénol, leader of LIFE-ADVICLIM, a research project developing adaptation strategies for wineries. In order to adapt, growers are looking to change grape varieties, farming methods, and even locations to climates formerly too cold for planting.

But there's another side of climate change within the wine world that's often overlooked. A 2013 analysis found that the wine industry is responsible for 0.3% of global greenhouse gas emissions. That's not insignificant.



The energy-efficient architecture at Waltraud Winery. / Photo courtesy of Familia Torres

The creation of Torres & Earth
It began with a music night. In 2007, Torres and his wife, Waltraud, watched an

Figure 29: LIFE-ADVICLIM in Web: « Two Producers Working to Protect the Future of Wine », Wine Enthusiast, 05/2019

HUFFPOST

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HUFFINGTON POST 12/02/2015 9:54 PM ET

Climate Change May Change The Global Wine Map

What we know for sure is that the wine we'll drink in 2050 won't be the same as what we drink today.

Alexandre Boudet HuffPost France

Scientists call grapes, on Aug. 22, 2015, in Langes, France, as part of an anti-global warming program aiming to develop solutions for producing wine under appropriate conditions.

Global warming has its markers, such as melting ice caps and rising sea levels. Its impact on the world's vineyards is another, lesser known issue. And so it's fitting that the COP21 conference on climate change is currently being held in Paris, and that Tuesday's topic of discussion was agriculture.

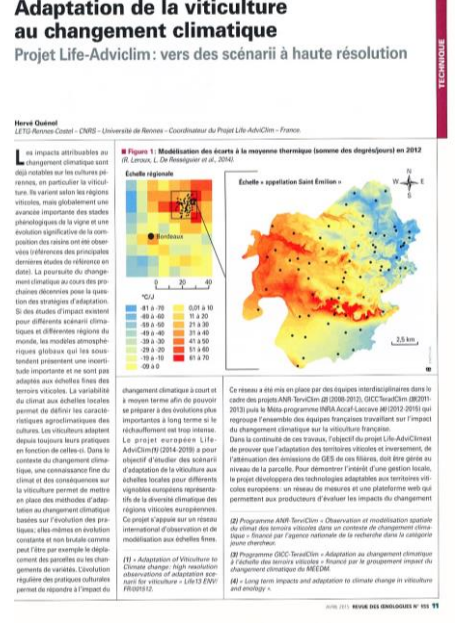
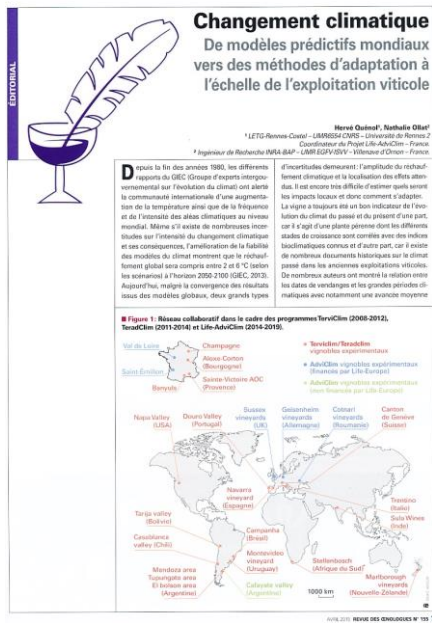
"The vine is indeed a perennial plant that allows scientists to make comparisons from one year to another," says Hervé Quénol, a researcher at the French National Centre for Scientific Research and a scientist with the International Organization of Vine and Wine. "Also, this plant has well-defined stages of growth that are directly related to temperature, whether it's budding, flowering, the formation of clusters or, of course, the harvest. The consequences on these stages have been widely visible for several years."

Demands

TRENDING

- Trump Administration Tells Employers Not To Worry About Recording COVID-19 Cases
- De Blasio Says NYC Schools Will Stay Closed Through June, Cuomo Says That's 'His Opinion'
- Magician Walks Through U.S.-Mexico Border Wall in 'Riskiest Stunt'
- Bernie Sanders Proposes Emergency Version Of 'Medicare For All' For The Pandemic
- Trump Reportedly Weighed Letting COVID-19 'Wash Over' U.S., But Was Warned Of Grim Toll

Figure 30: LIFE-ADVICLIM in Web: « Climate change may change the global wine map », Huffington Post, 12/02/2015



a) National Edition, n°155, April 2015)



b) Regional Editions in Bordeaux and Val de Loire (n°157)

Figure 31: Presentation of the LIFE-ADVICLIM project in the "Revue des Œnologues". National Edition (n°155, April 2015) (a) and regional editions (b)



Adaptation de la viticulture au changement climatique

Approche locale d'évaluation – Vignoble Anjou-Saumur

Étienne Neethling¹, Gérard Barbeau, Séverine Julien¹, Hervé Quéno²

¹ ESA – USC 1422 GRAPPE-INRA, École supérieure d'Agricultures – Angers – France.

² CNRS – UMR 6554 LETG – Université Rennes2 – Rennes – France.

Page(s) : 17 à 18

Extrait/Résumé Bibliographie Dans la même revue (1) Articles similaires (15)



Dans la poursuite d'une production de vin orientée vers la qualité, la relation étroite entre le climat et la vigne a constamment amené les viticulteurs à ajuster leurs activités. Confrontés au changement climatique, les viticulteurs sont à nouveau sollicités à repenser leurs pratiques et stratégies viticoles. Cependant, l'adaptation au changement climatique implique de nombreux questionnements (quels sont les impacts attendus sur la qualité et la typicité du vin, sur l'appétite des cépages actuellement cultivés, etc.). Alors que

Figure 32: Results of the LIFE-ADVICLIM project in the "Revue des Œnologues". National Edition (n°173, November 2019).

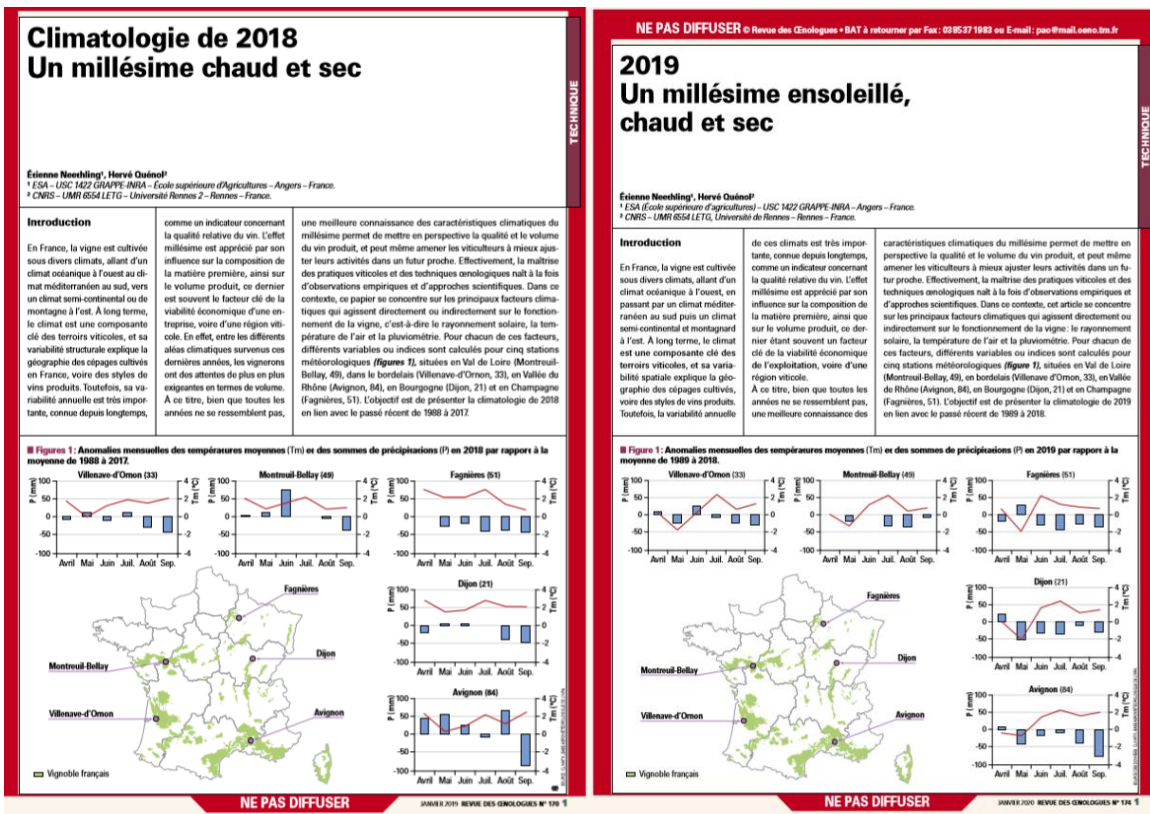


Figure 34: Climate and wine Results of the LIFE-ADVICLIM project in the "Revue des Œnologues". National Edition (n°170, January 2019 and n°174, January 2020).

STORY MAP

The purpose of building a story map aims to produce a chronological and thematic document describing the whole implementation of the scientific approach associated with the LIFE-ADVICLIM project. Story maps are digital narrative documents that associate static or dynamic illustrative elements with a text. These communication supports have demonstrated their ability to support the valorisation of research results. Here, the objective of the story map is to produce a synthesis document facilitating the dissemination of the knowledge acquired in the LIFE-ADVICLIM project. It allows the dissemination of general information on the project and the main results obtained. The story map is used to communicate with professionals in the wine industry (managers, cooperatives, winegrowers).

The story map contains interactive maps showing the location of the 90 sensors on the Saint-Émilion pilot site (Figure 37) as well as the average actual temperatures (Figure 38). Some of these dynamic elements are supported by graphics and illustrations (Figure 39) in order to provide a better understanding of the techniques used to get to the exposed results. The story map is online at adviclim.eu.

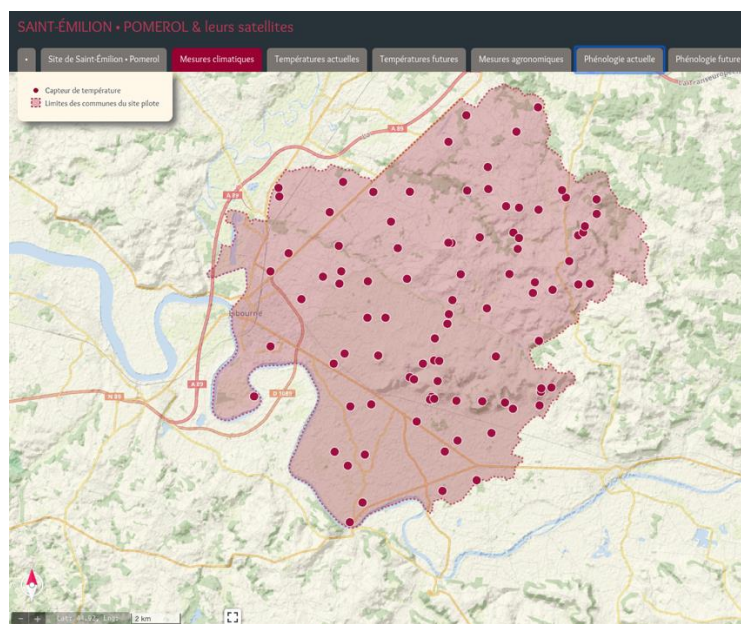


Figure 37: 90 sensors location of the Saint-Émilion pilot site.

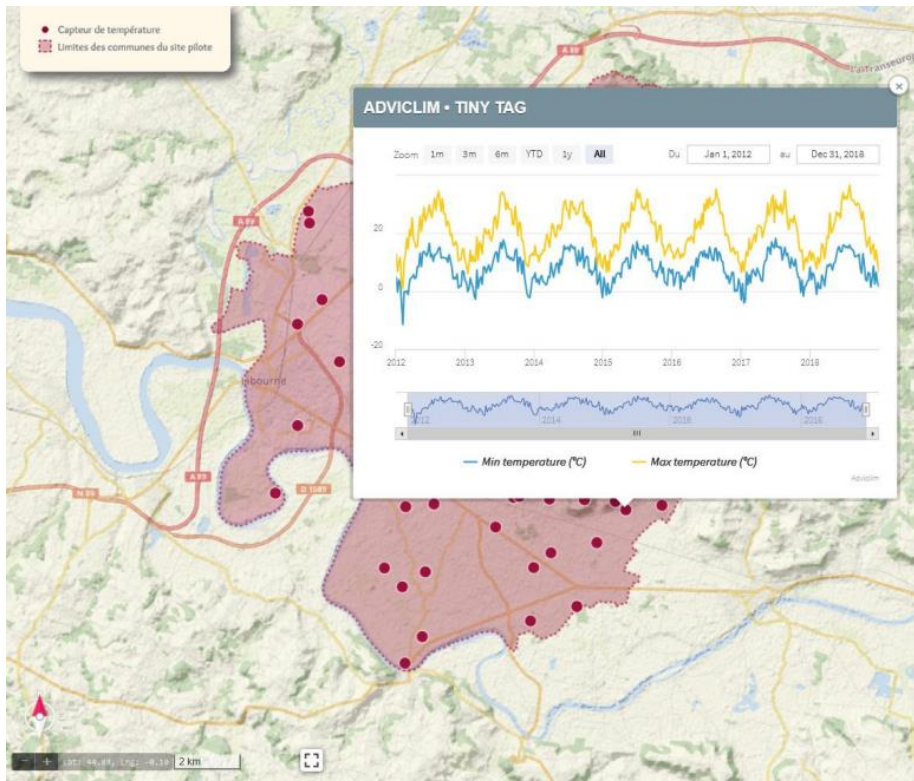


Figure 38: actual temperatures of the Saint-Émilion pilot site.

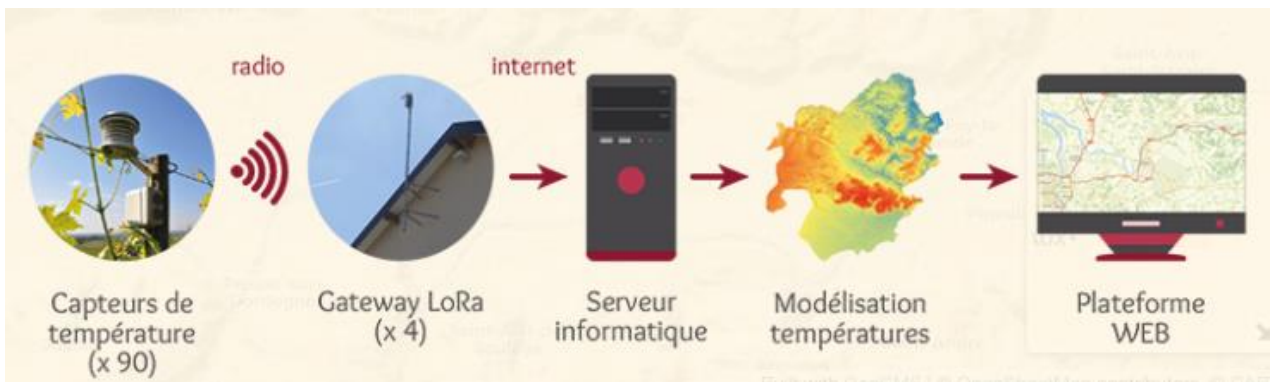


Figure 39: data acquisition for web modelling.



With the contribution of the LIFE financial instrument of the European Union

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