

BORDEAUX

# Challenges, obstacles & levers: adapting Bordeaux wine to climate change

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VINS DE  
BORDEAUX



# BORDEAUX WINES

Non-relocatable production

2000 years of viticulture

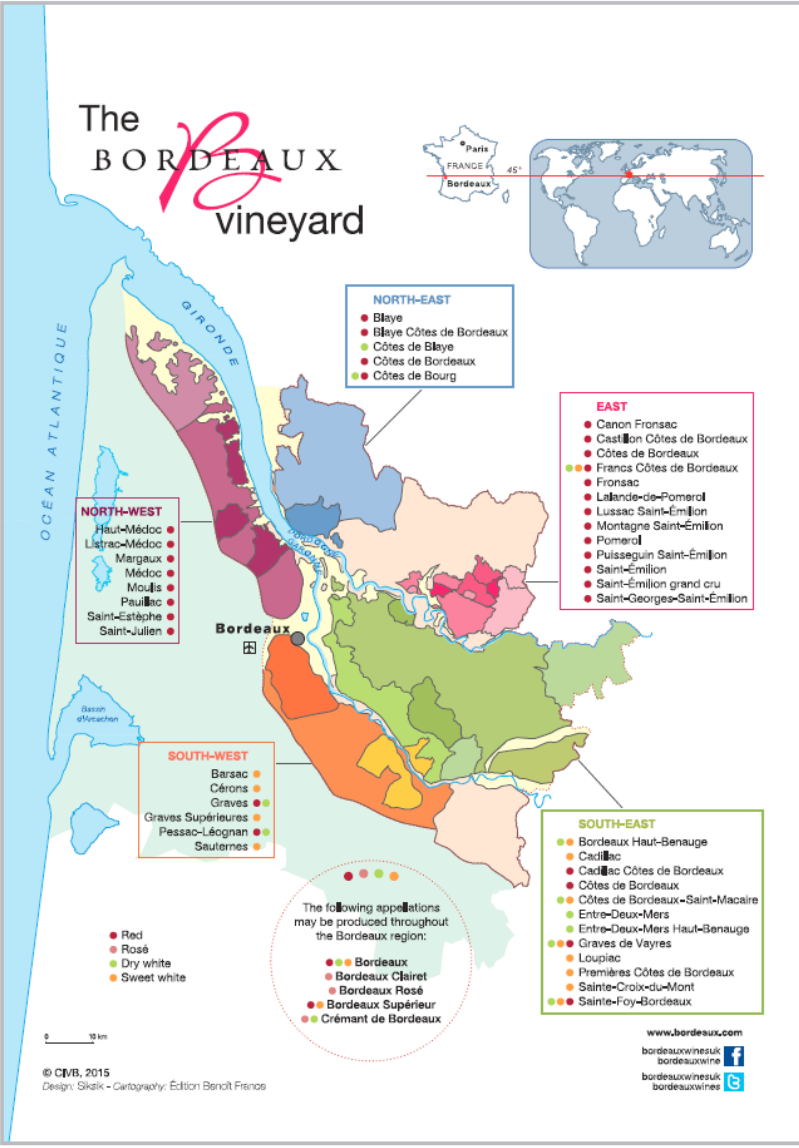
First AOC Region of France

AOC production of blended wines

- An exclusively AOC production with 60 Appellations d'Origine Contrôlée (AOC)
- Harvest: 5.5 million hectolitres (10-year average)



Grape varieties and soils





BORDEAUX WINES

Know-how and expertise

PEOPLE AND WINE  
NON-RELOCATABLE PRODUCTION

Top  
employer  
in  
Gironde

over 10,000  
businesses in Gironde

55,000  
direct and indirect jobs  
1 employee in 10 in Gironde



6 600  
WINEGROWERS



36 WINE COOPERATIVES

4 COOPERATIVE UNIONS



300  
WINE MERCHANTS



84 BROKERS



Institute of Vine and Wine  
Science (ISVV)  
Bordeaux



# BORDEAUX WINES

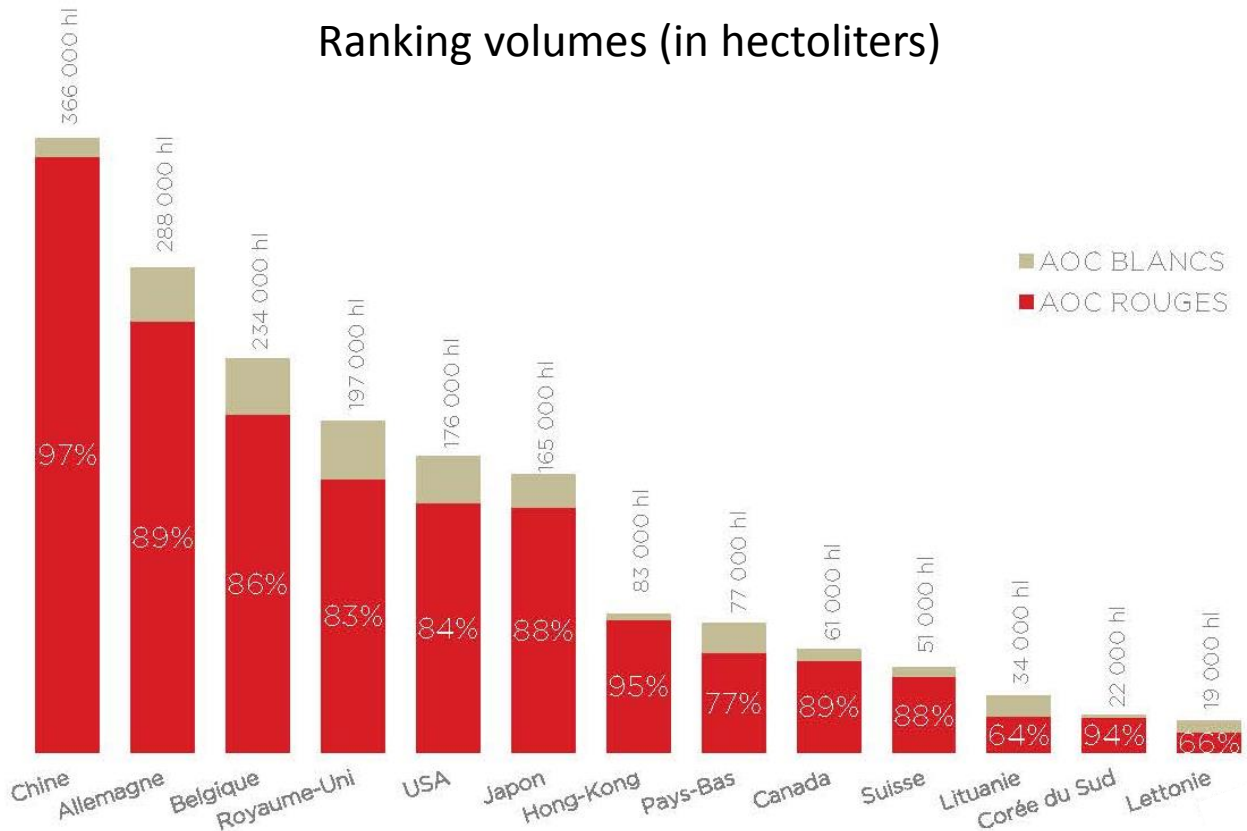
**650 million bottles** sold yearly in France and exported, totalling

**€3.78 billion** in turnover 2014/2015 figures



## Markets

Ranking volumes (in hectoliters)

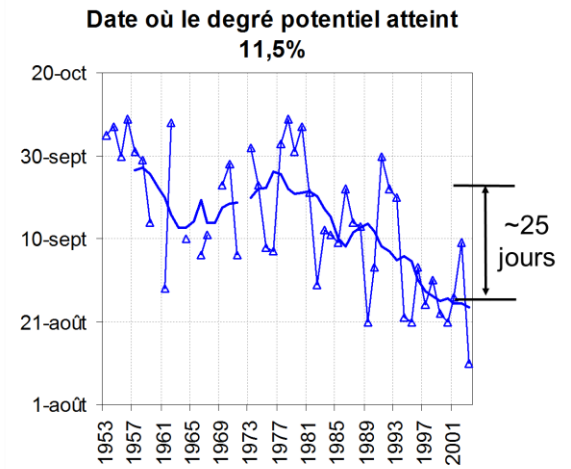


Sales in over **150 countries** (2014/2015 campaign)

**23 bottles per second !**

# Climate change: findings over a 25-year period

- Phenology (precocity), Grapes and wines
- A favourable impact on the quality of Bordeaux wines
- Impact of growing practices on qualitative improvements
- Long-term uncertainty and regional impact
  - Rising water
  - Violence and frequency of climatic events (hails)



# Bordeaux wines: an ever-adapting industry

Adapt to:

- Disease (downy mildew, powdery mildew, black-rot, phylloxera)
- Weather hazards (frost, hail, etc.)
- Market expectations (whites -> reds)

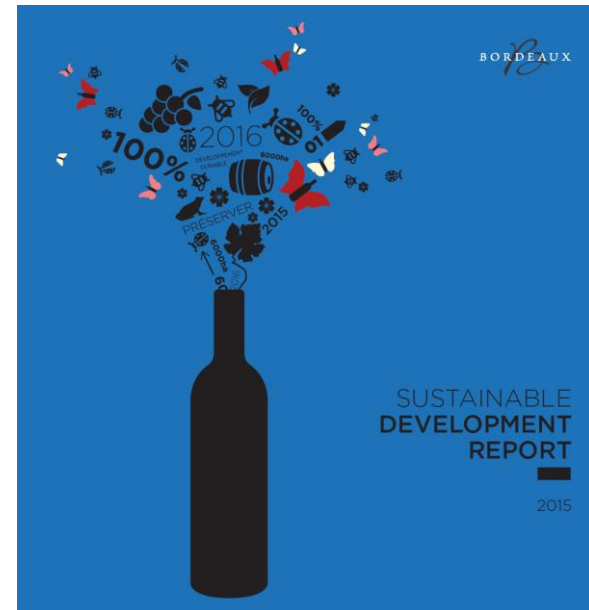
Bordeaux wines will adapt to climate change

- Change practices
- Through innovation and anticipation

# Challenges for Bordeaux Wine

- Vineyard sustainability
  - Fight against the decline
- Environment
  - Reducing the environmental footprint
  - Preserving our image
- Economy
  - Keep Economically-viable production, higher production cost, go upmarket, investment

*Sustainable Development in the Bordeaux wine industry*



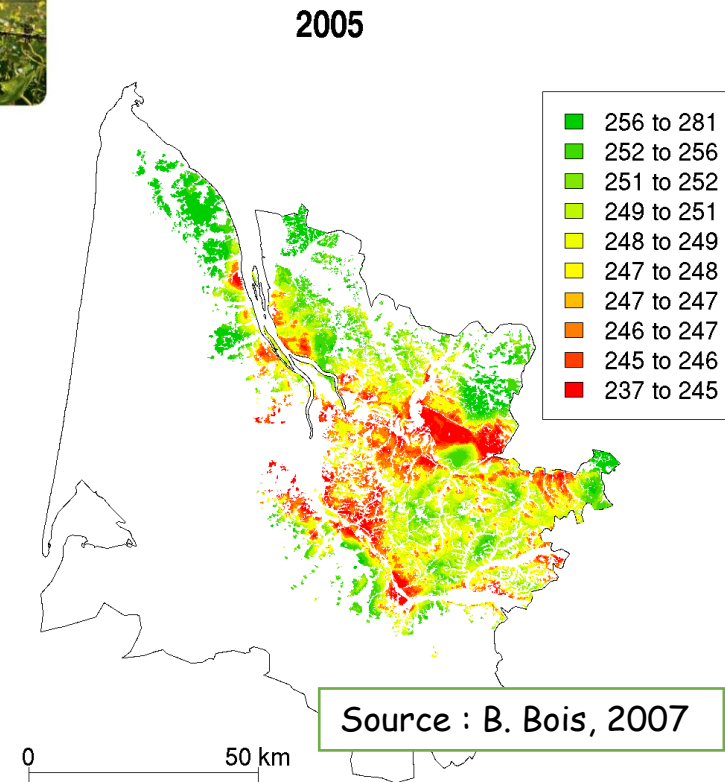
# The adaptation measures of Bordeaux wine industry



# 1/ Researches to anticipate and adapt



- 25 years of research on environmental protection
- Focus on adaptation since 2003
- Need for knowledge and references
- Need for innovation
- Work on the plant material , microclimate , wine quality , the driving modes , the plant material , ...



## 2/ A comprehensive approach : mitigation and adaptation Carbon footprint , Climate plan, Roadmap



## 2/ A comprehensive approach : mitigation and adaptation Carbon footprint , Climate plan, Roadmap

### Carbon footprint 2013 :

Decrease in 5 years 9% of our emissions of greenhouse gases, with strong export business

### Climate plan : targets 2020

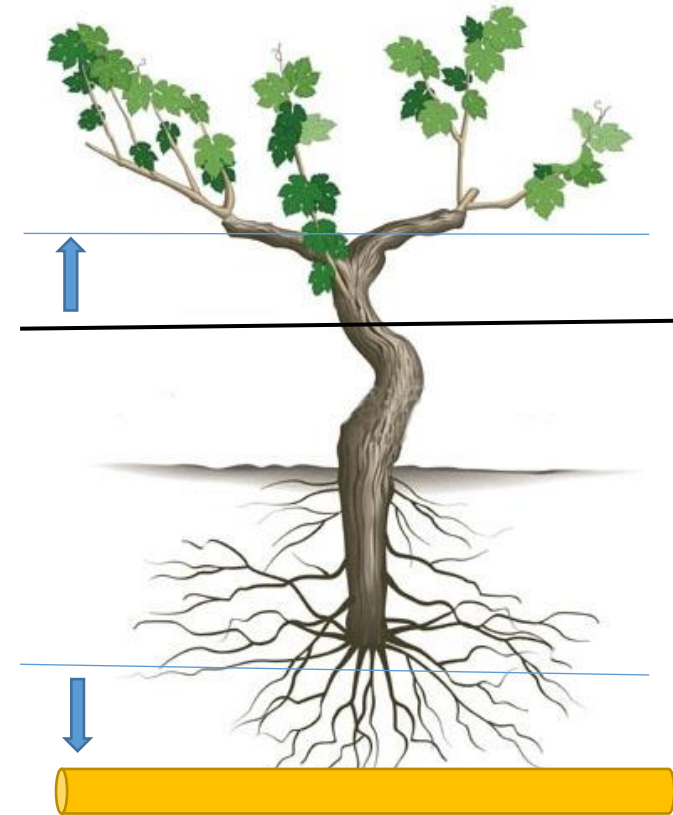
- 20 % of greenhouse gas emissions
- 20 % of energy consumption
- + 20 % renewable energy
- 20 % of water consumption



# Adaptation solutions exist and are implemented

Some examples :

- Plant material: choice of clones, grape varieties and rootstocks
- Choice of plots by local climatology , plain , east and north
- Working method: rise of tying wire to move away from the ground green work unless applied
- Drainage according to situation to increase the volume explored by the roots
- Night harvest
- ...



Source : INRA

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# Adaptation tracks in the longer term

To a high precision viticulture

- a world more connected, better modeled ; act each vine
- Observatory vineyard

More resilience to uncertainty

- Biodiversity , variety / varieties assembly and rootstocks

Conclusion

- Bordeaux wine 2016  $\neq$  Bordeaux wine 1855
- At this time, Climate change is good for Bordeaux wine

Bordeaux Wine Council

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**Thanks for your  
attention**