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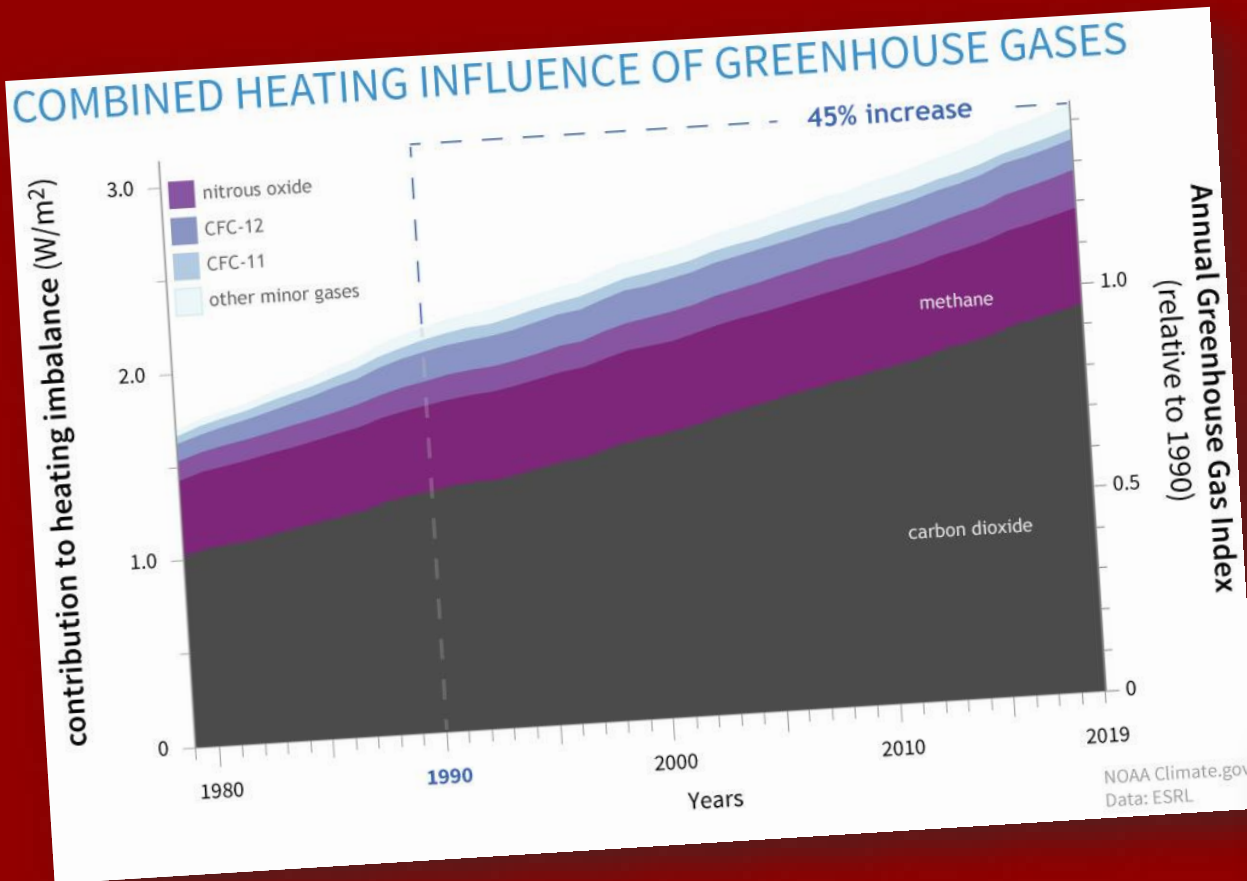
Paradigm Shift: Climate, Terroir & Wines of the Future

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Wine Auction Prices
THE BLUE BOOK OF WINE VALUES

“Paradigm Shift”

There is no doubt among informed scientists concerning the gravity of the worsening crisis.



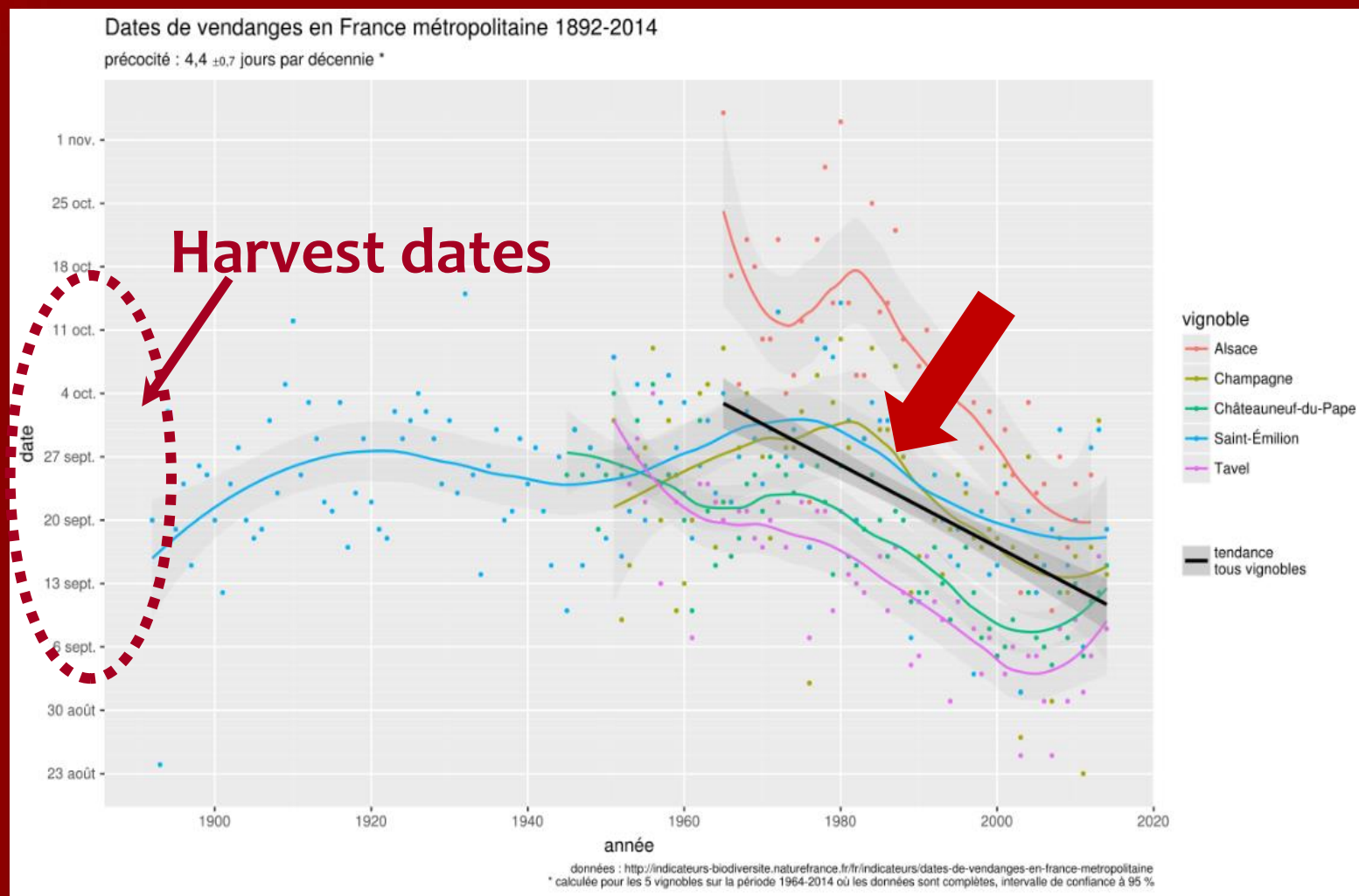
In 2020, the Alliance of World Scientists issued a statement from more than 11,000 scientists warning that **“planet Earth is facing a climate emergency.”**

Gases, led by carbon dioxide together with methane and nitrous oxide, are triggering rising temperatures.

In 2021, IPCC warns of **“widespread, rapid, and intensifying”** climate change.

“Paradigm Shift”

Harvest dates in France from 1892-2014.



Solid black line indicates the trend since 1964 and is a composite of all 5 regions. Harvesting has advanced 4.4 days per decade.

“Paradigm Shift”

There are strategies which can be implemented with varying degrees of disruption and cost before temperatures break through the ceiling a grape variety can tolerate.

- ✓ **Picking** some varieties or vineyard parcels earlier
- ✓ Altering the selection of **lots and varieties**
- ✓ **Blocking the malo-lactic** (for white wines) or acidifying the must
- ✓ Employing a **spinning cone** to remove unwanted alcohol from finished wine
- ✓ **Water** can be added to dilute excessively rich musts...

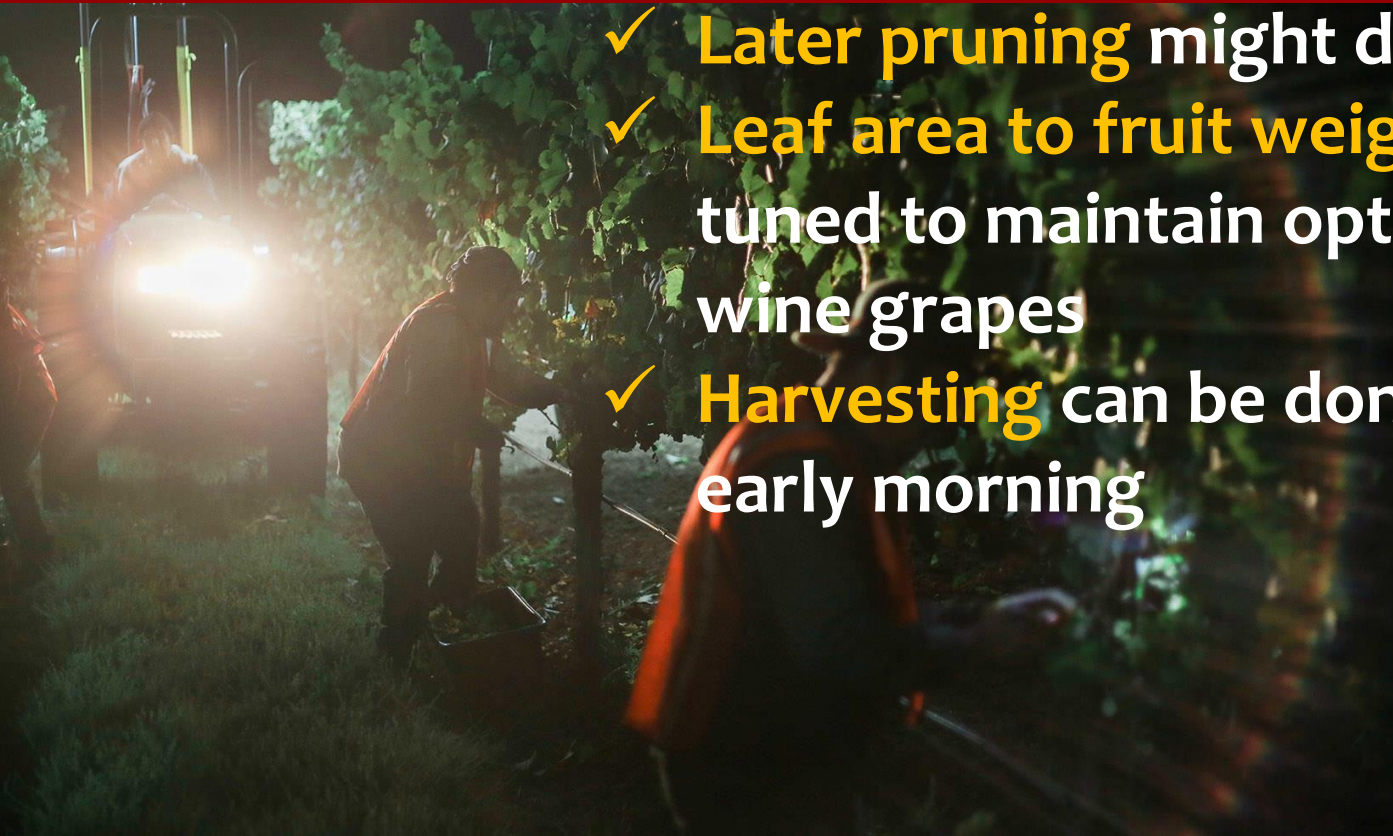
Michel Chapoutier: **“It’s the future of wine.”**

(Robinson, 2014)

“Paradigm Shift”

In the vineyard...

- ✓ **Mulching** will hold moisture
- ✓ **Irrigation** could be introduced or recalibrated to counter increased vine water stress
- ✓ **Later pruning** might delay phenology
- ✓ **Leaf area to fruit weight ratio** could be fine-tuned to maintain optimum ripening of white wine grapes
- ✓ **Harvesting** can be done in the cool of night or early morning



“Paradigm Shift”

Replanting with a new cultivar, clone and rootstock
as well as utilizing a different form of vine training
could become necessary if circumstances worsen.

Unless **regulations** are
rewritten, however, growers in
rule-bound European
appellations **will not be at
liberty to introduce
modifications** such as these, no
matter the practicality.

Cahier des charges de l'appellation d'origine contrôlée « VOLNAY »
homologué par le décret n° 2011-1535 du 14 novembre 2011, JORF du 16 novembre 2011

CAHIER DES CHARGES DE L'APPELLATION D'ORIGINE CONTRÔLÉE « VOLNAY »

CHAPITRE I^{er}

I. - Nom de l'appellation

Seuls peuvent prétendre à l'appellation d'origine contrôlée « Volnay », initialement reconnue par le décret du 9 septembre 1937, les vins répondant aux dispositions particulières fixées ci-après.

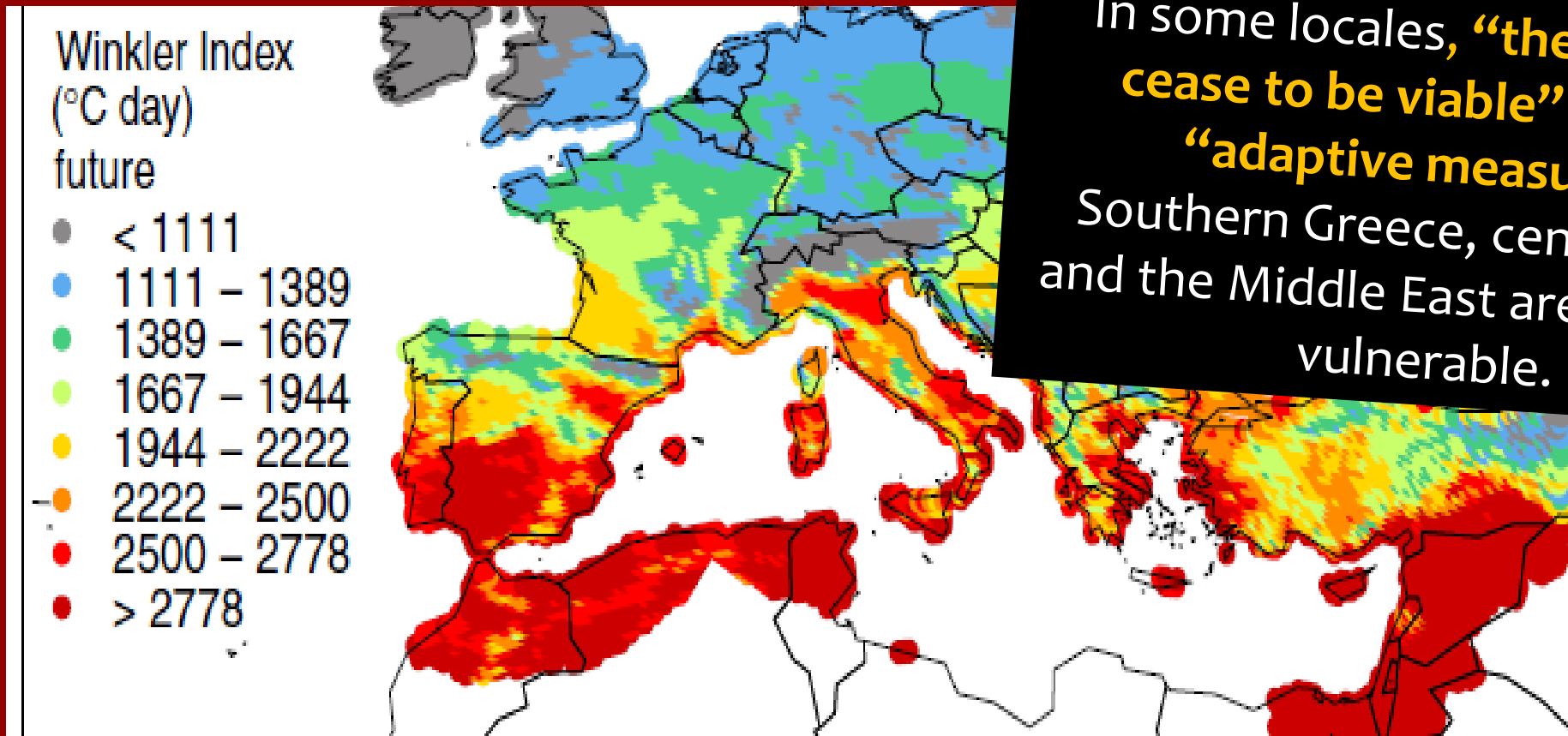
II. - Dénominations géographiques et mentions complémentaires

1°- Le nom de l'appellation d'origine contrôlée peut être complété par la mention « premier cru » pour les vins répondant aux conditions de production fixées pour cette mention dans le présent cahier des charges.

2°- Le nom de l'appellation d'origine contrôlée peut être complété par la mention « premier cru » et suivi du nom d'un des climats énumérés ci-après, pour les vins répondant aux conditions de production fixées

“Paradigm Shift”

Southern Europe and the Mediterranean will be “negatively affected” owing to “a future increase in cumulative thermal stress and dryness during the growing season.”



In some locales, **“the vine may cease to be viable”** without **“adaptive measures.”**
Southern Greece, central Spain and the Middle East are especially vulnerable.

“Paradigm Shift”

If there is further warming of 2° C by the mid-21st century, a conservative scenario, academics such as Elizabeth Wolkovich predict that some cultivars will no longer be suitable for their present viticultural addresses.

Researchers speak of
“intraspecific diversity”
referring to the varied requirements of grape varieties

Swapping cultivars could reduce global vineyard loss
from 56% to 24%...

But planting new vines is not a panacea!

“Paradigm Shift”

CONCLUSIONS

The world of wine as we know it is very likely to undergo a metamorphosis as climate evolves.

**The fabled terroirs romanticized in books,
the ones we view as immutable and eternal...
may well be turned on their heads.**