

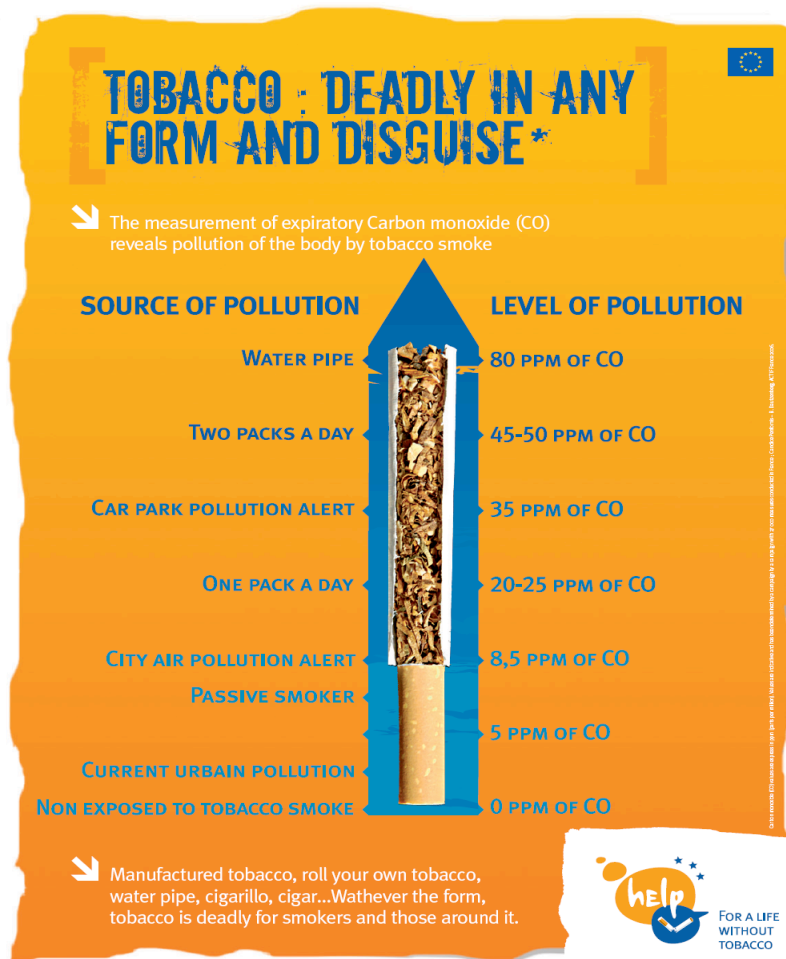
Help-COmets

**Presentation of the largest
Carbon monoxide (CO_{ex})
measurement campaign
never done in the world**

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Pitié Salpêtrière University Hospital Paris
Office Français de prévention du tabagisme (OFT)

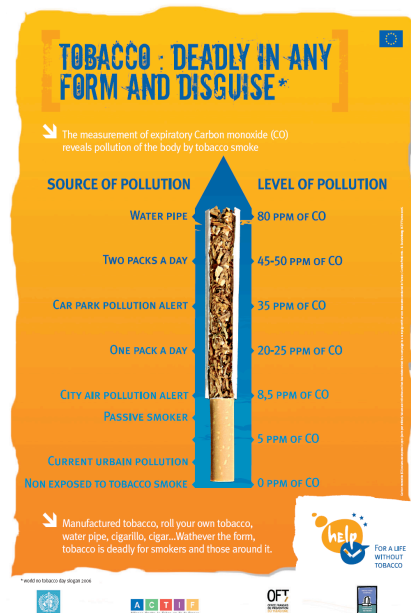
CO_{ex} measure



- Carbon monoxide (CO) is an odorless, colorless gas that interferes with the delivery of oxygen in the blood to the rest of the body.

- CO is a pollutant produced by the combustion of gasoline, coal, cigarettes and any fire as tobacco consumption.

CO_{ex} measure



- CO is seen as a pollutant product and regulated in vehicle exhausts.

CO is regulate as a pollutant of ambient air in EU

<8.5 ppm

(ppm = concentration of gas expressed in part per million).

The increase of CO in blood is associated with :

- an immediate increased risk of cardiovascular disease,
- a decrease of body weight on children from pregnant women,
- a deprivation in oxygen of all organs.

CO is regulate as a pollutant of tobacco smoke in the EU



Toxic for smokers

Max 10 mg/cig in EU

Toxic for non smokers

More toxic for pregnant women and foetus because of foetale homoglobin high affinity for this toxic

Why integrate CO measure to the Help campaign ?

CO is easy to measure in expiratory air.

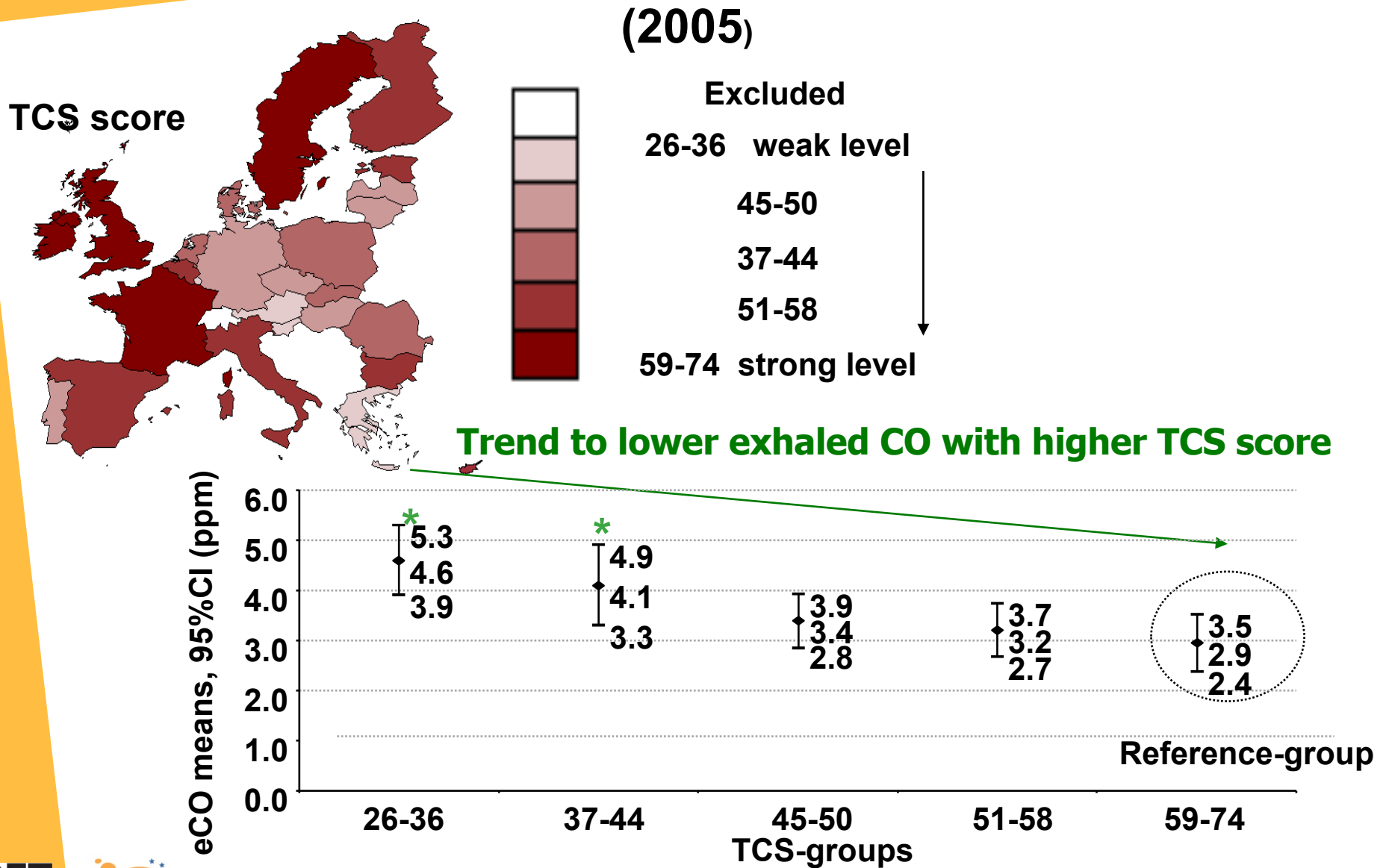
By experience CO measurement is a good tool to present tobacco smoke as a dirty non friendly product.

→ Smokers are informed of the pollution of their body and may change in intent to quit.

→ Non smokers may check passive pollution of their body and ask for a smoke free environment.



Main lesson for 2007 study → Significant difference in exhaled CO in non-smokers by the overall Tobacco control score (2005)



Number of participants to the Help-COmets

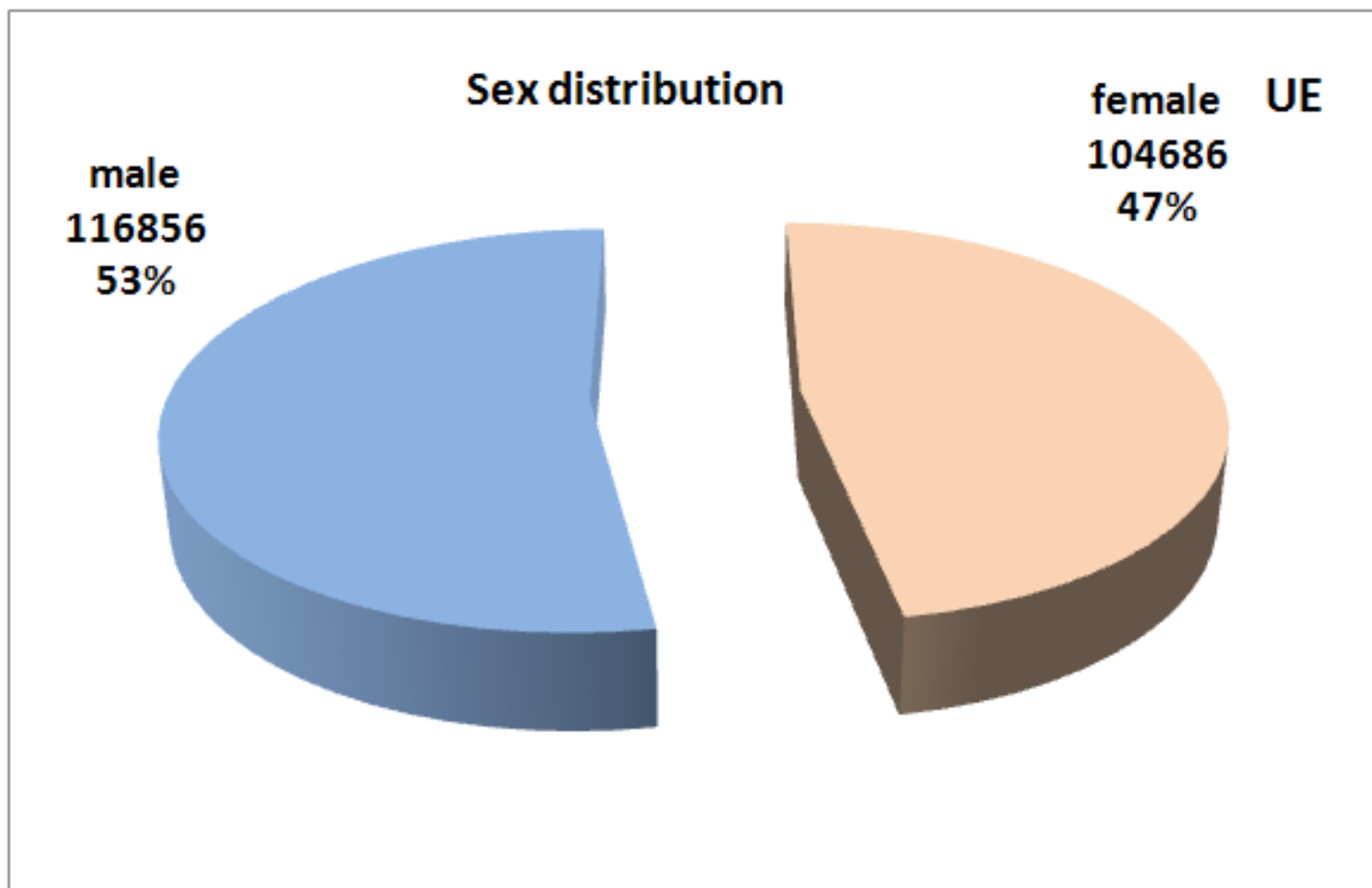
Analyse of
223 050 measures of
CO exhaled computerized
in the 27 EU countries

>1/2000
European
citizen
actively
participate !

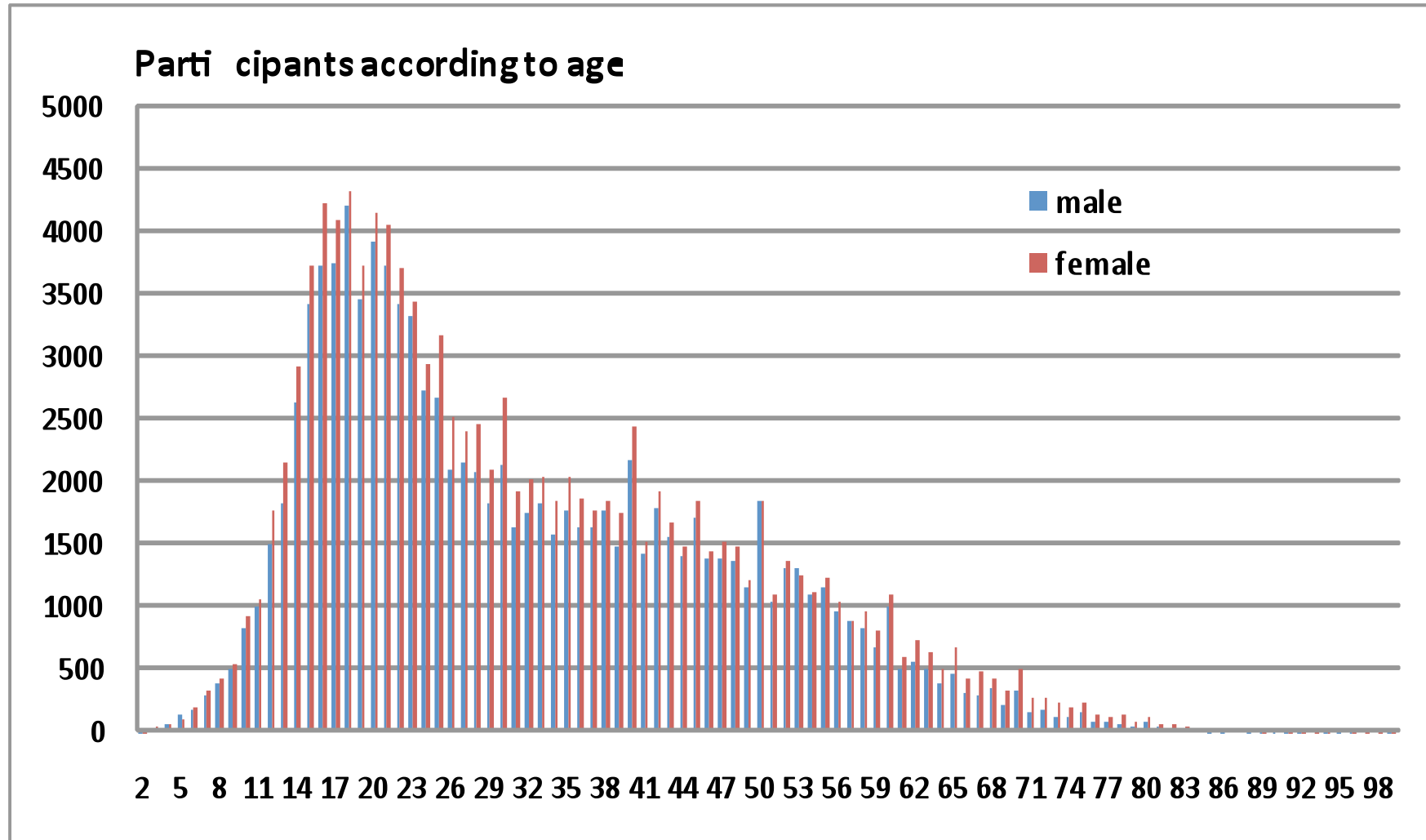
Nb: Approximately 80 000 new data's are
not computerised at this time.

Help-Comets events and population

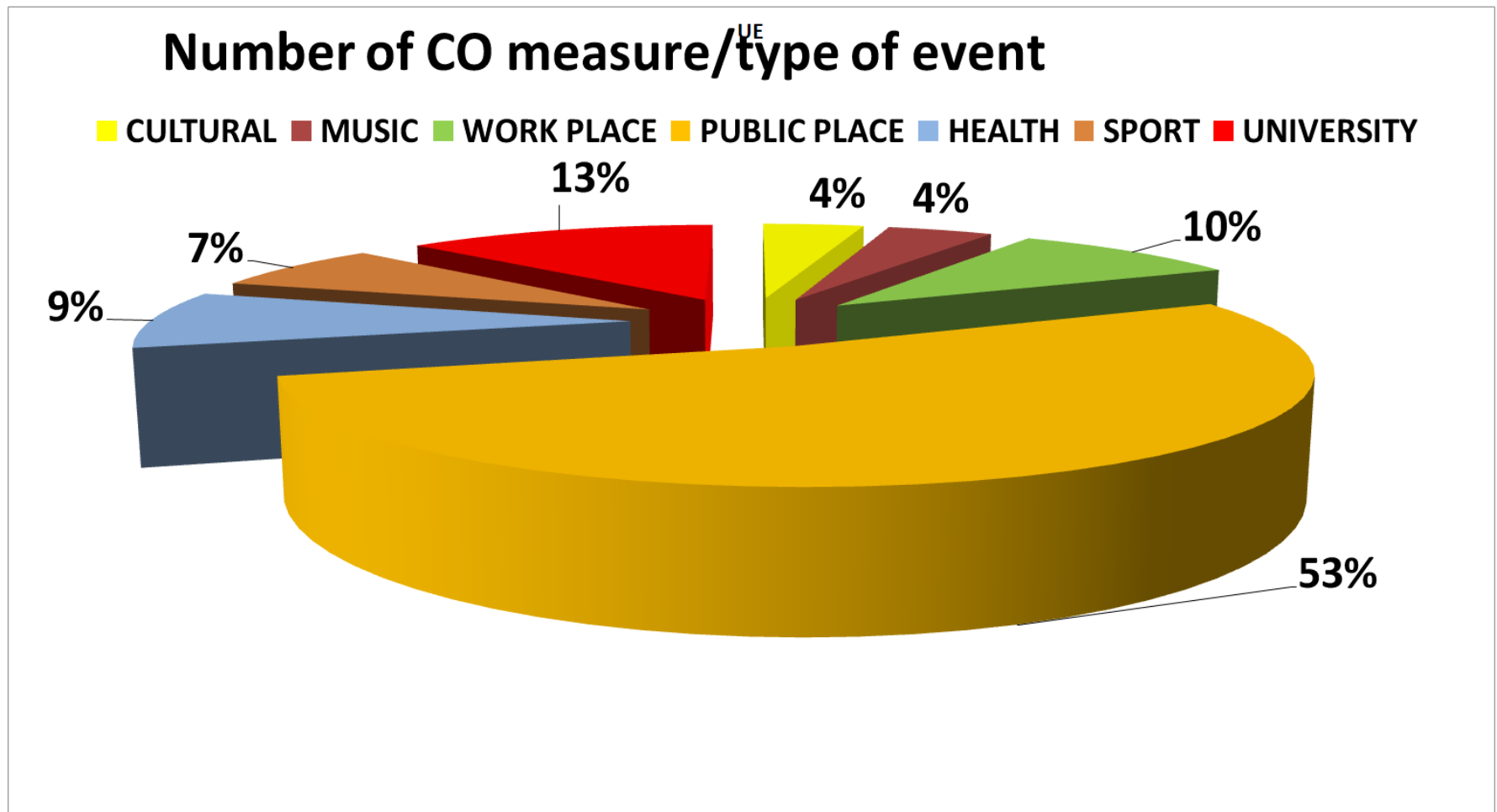
Distribution by sex of Help-COmets participants



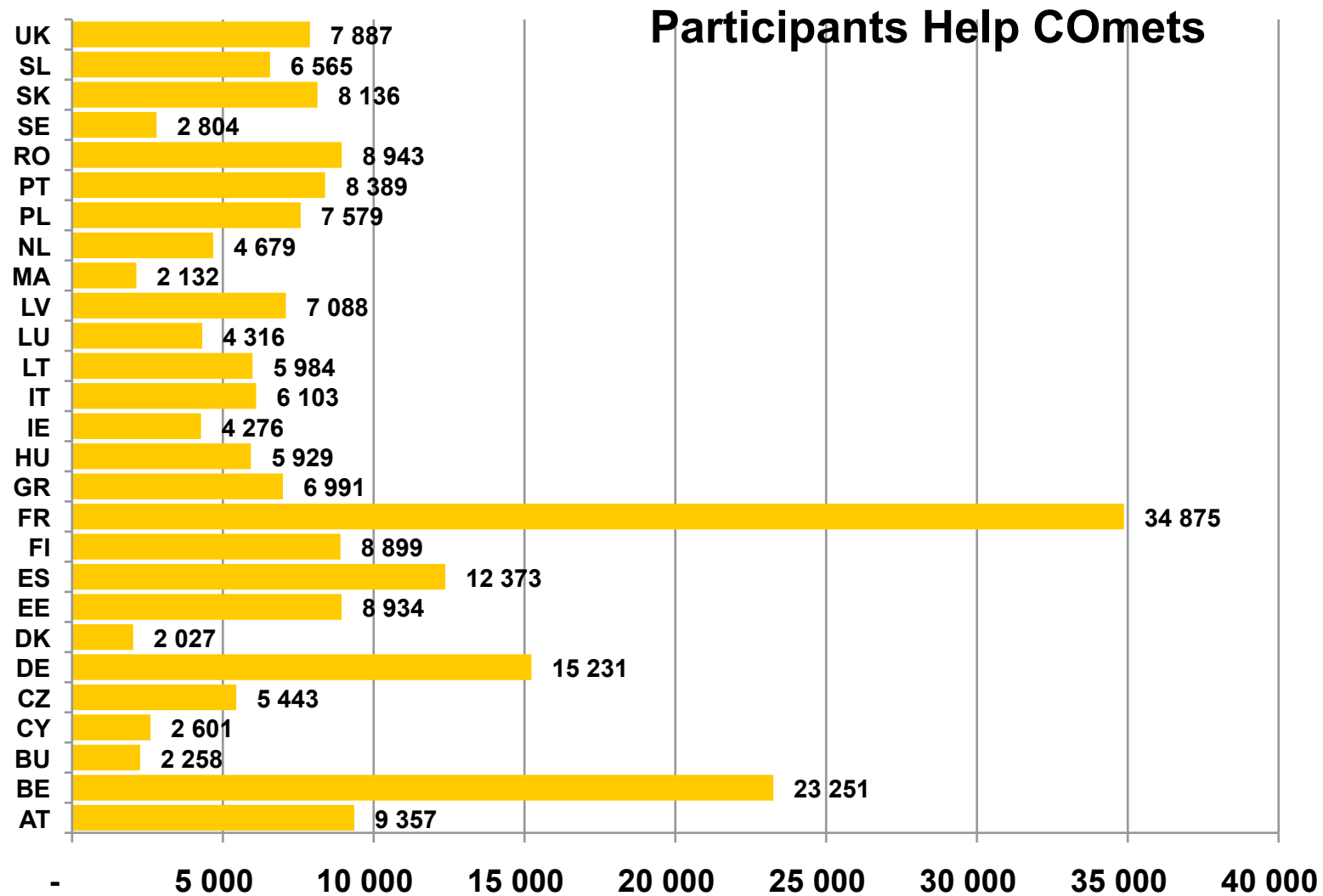
Age distribution of participants



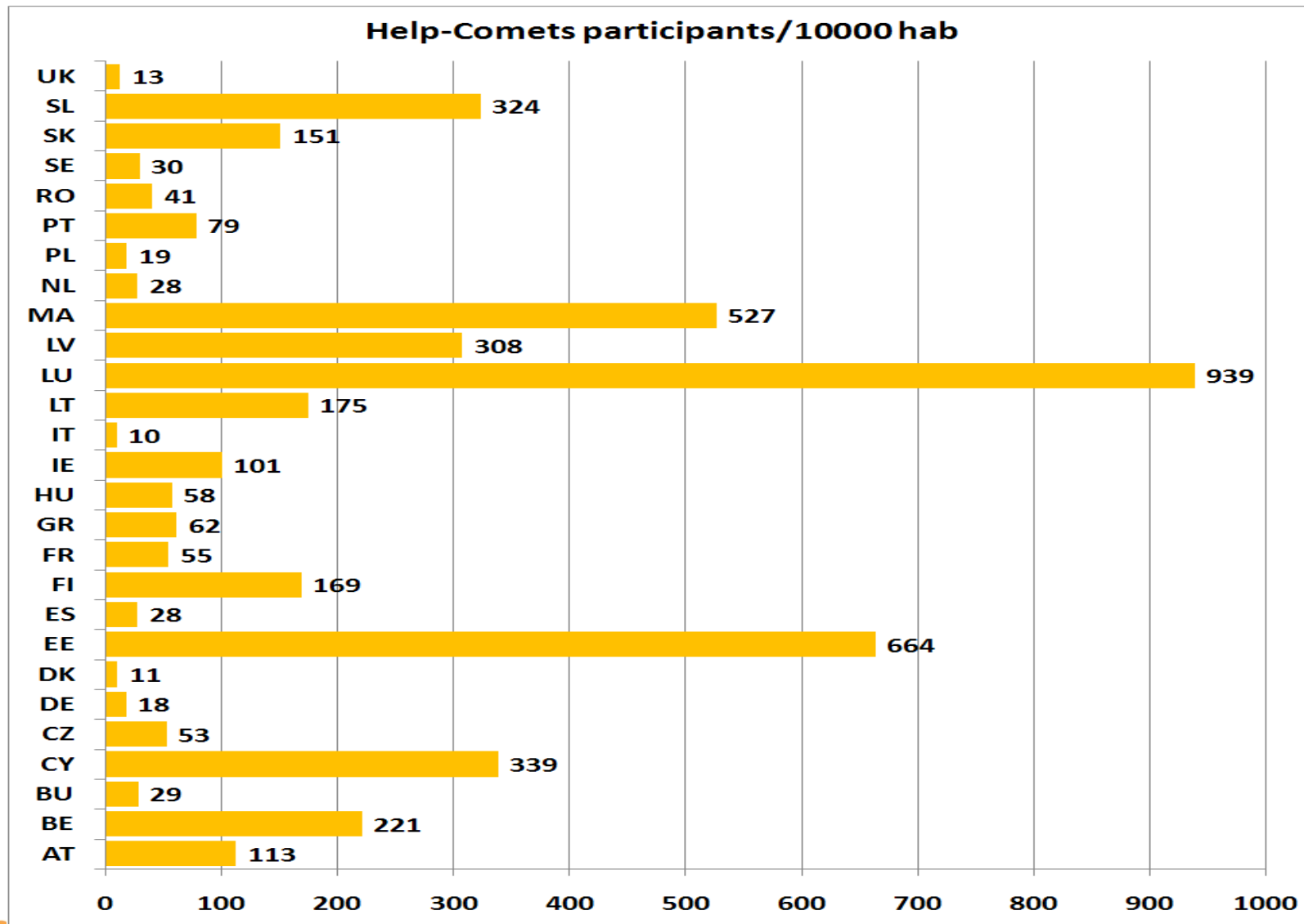
Category of Help-COmets events



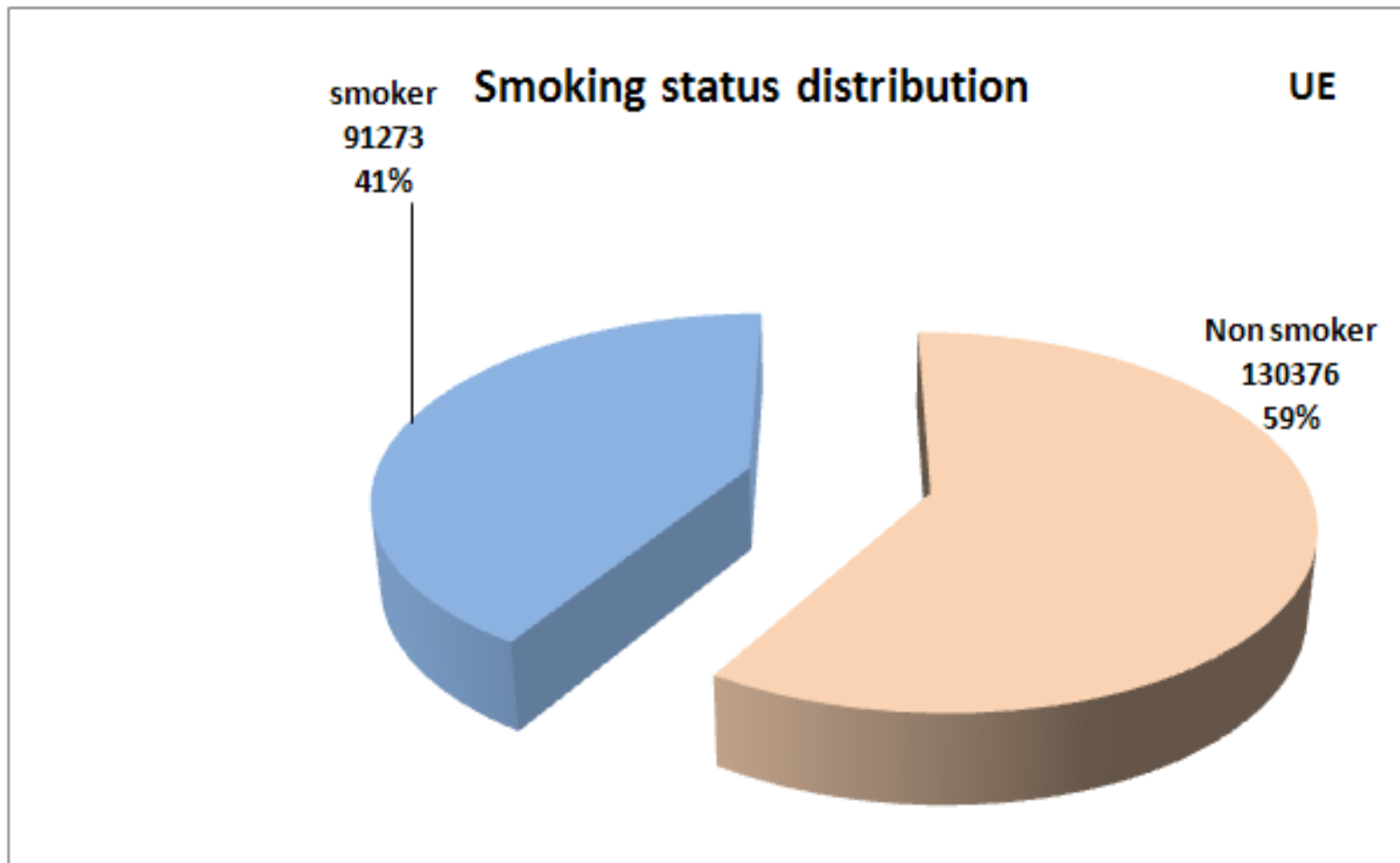
Number of CO_{ex} measures / country



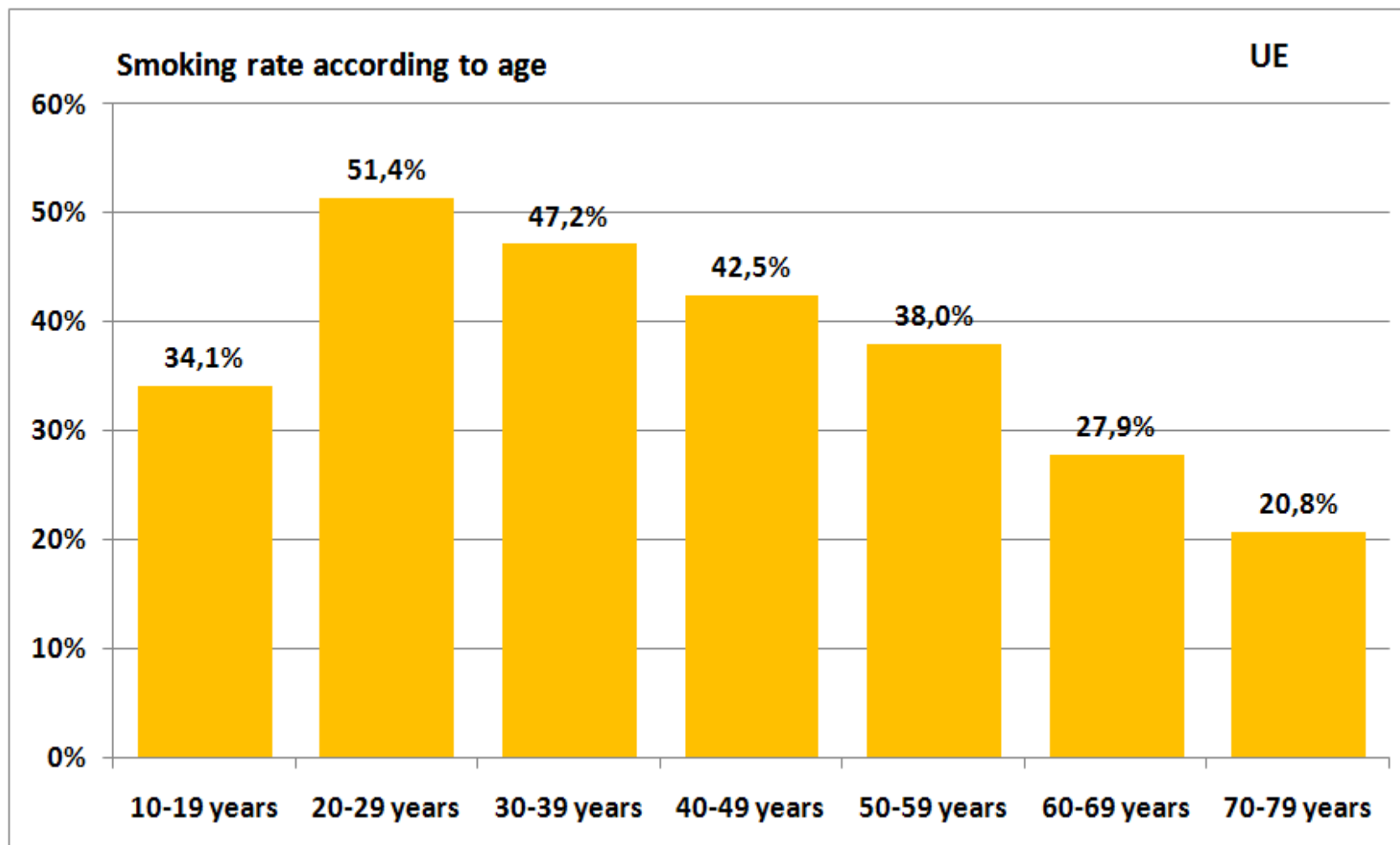
Number of CO_{ex} measures/100 000 h



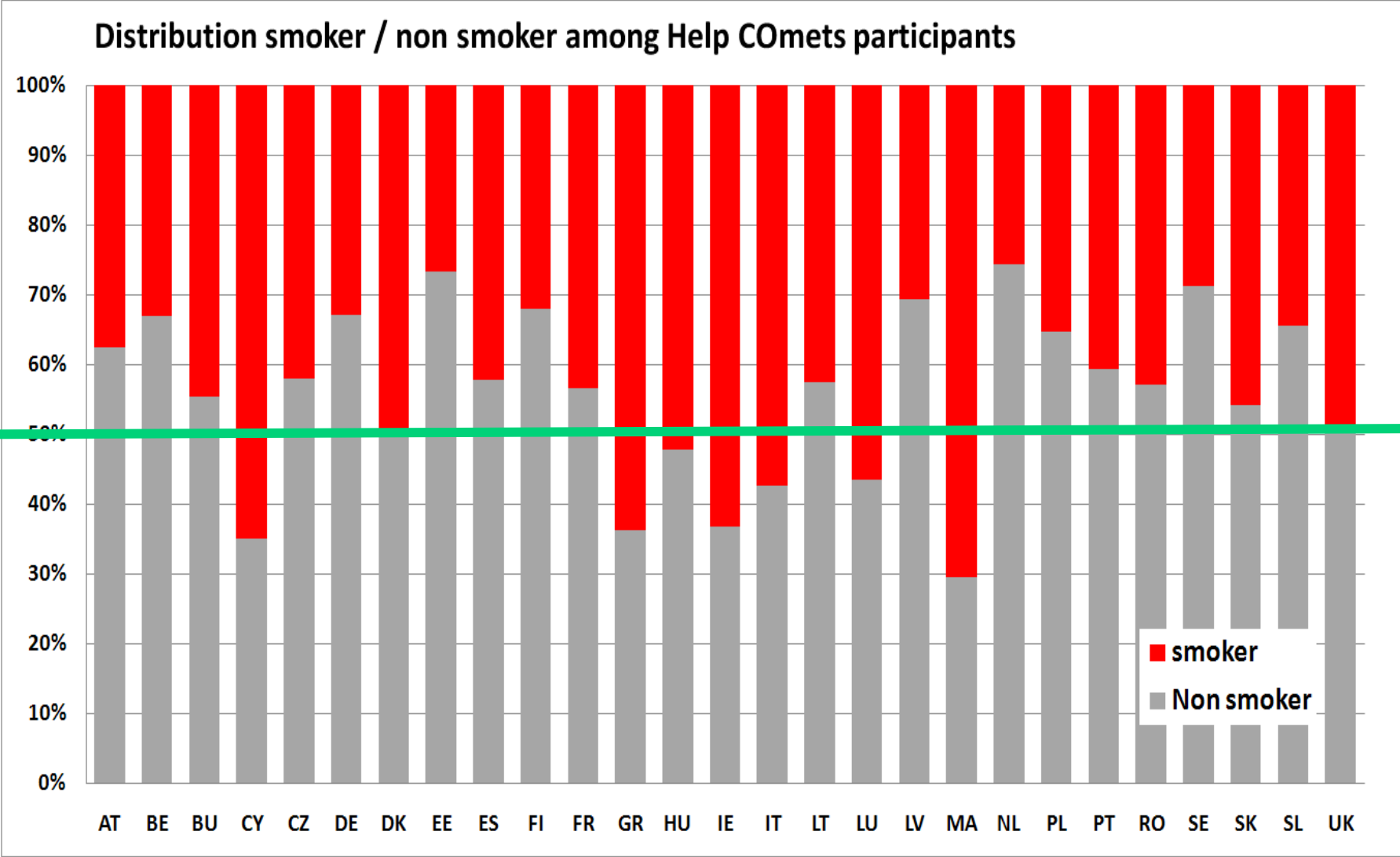
Smoking habits of Help-COmets participants



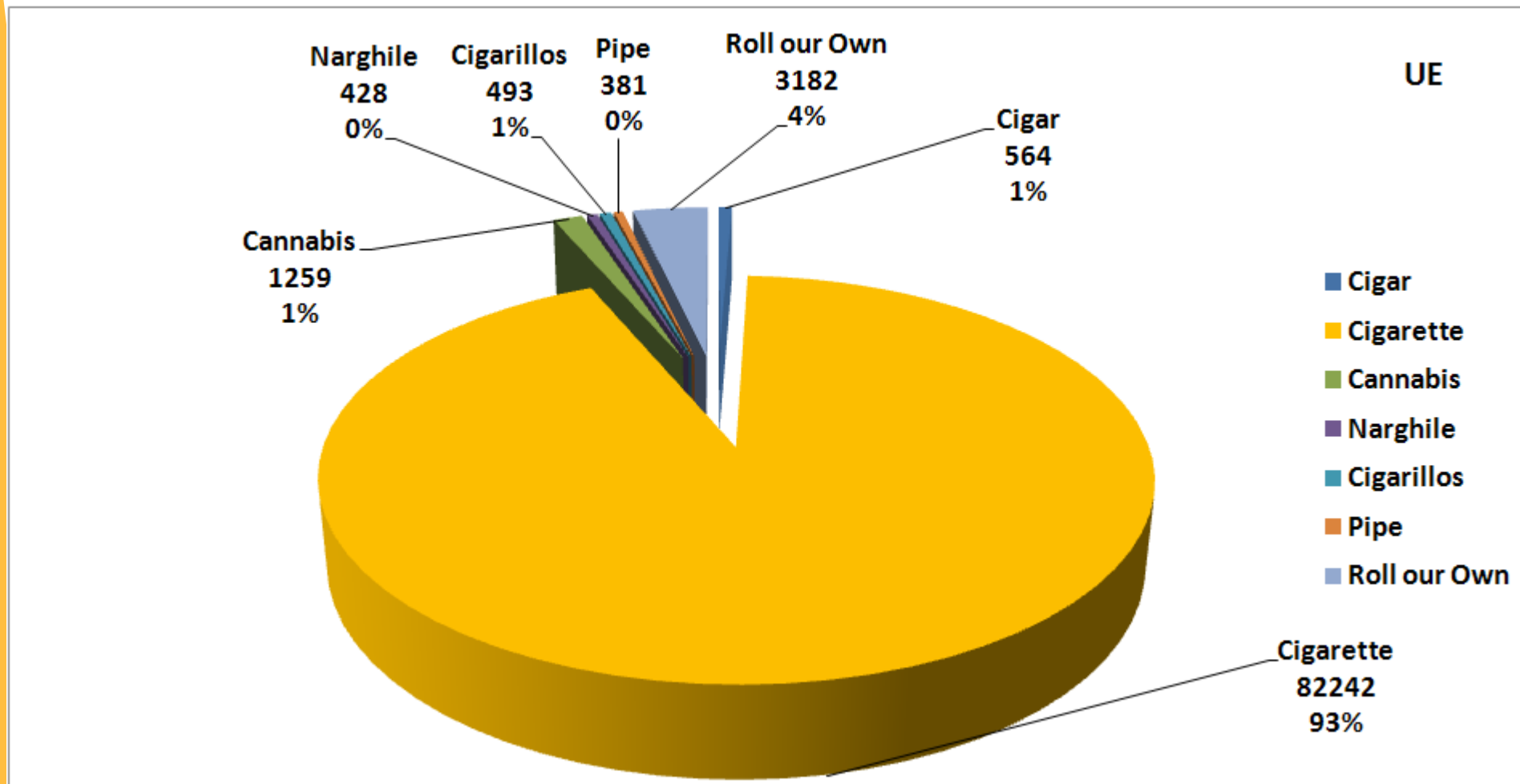
Distribution by age and smoking status of Help-COmets participants



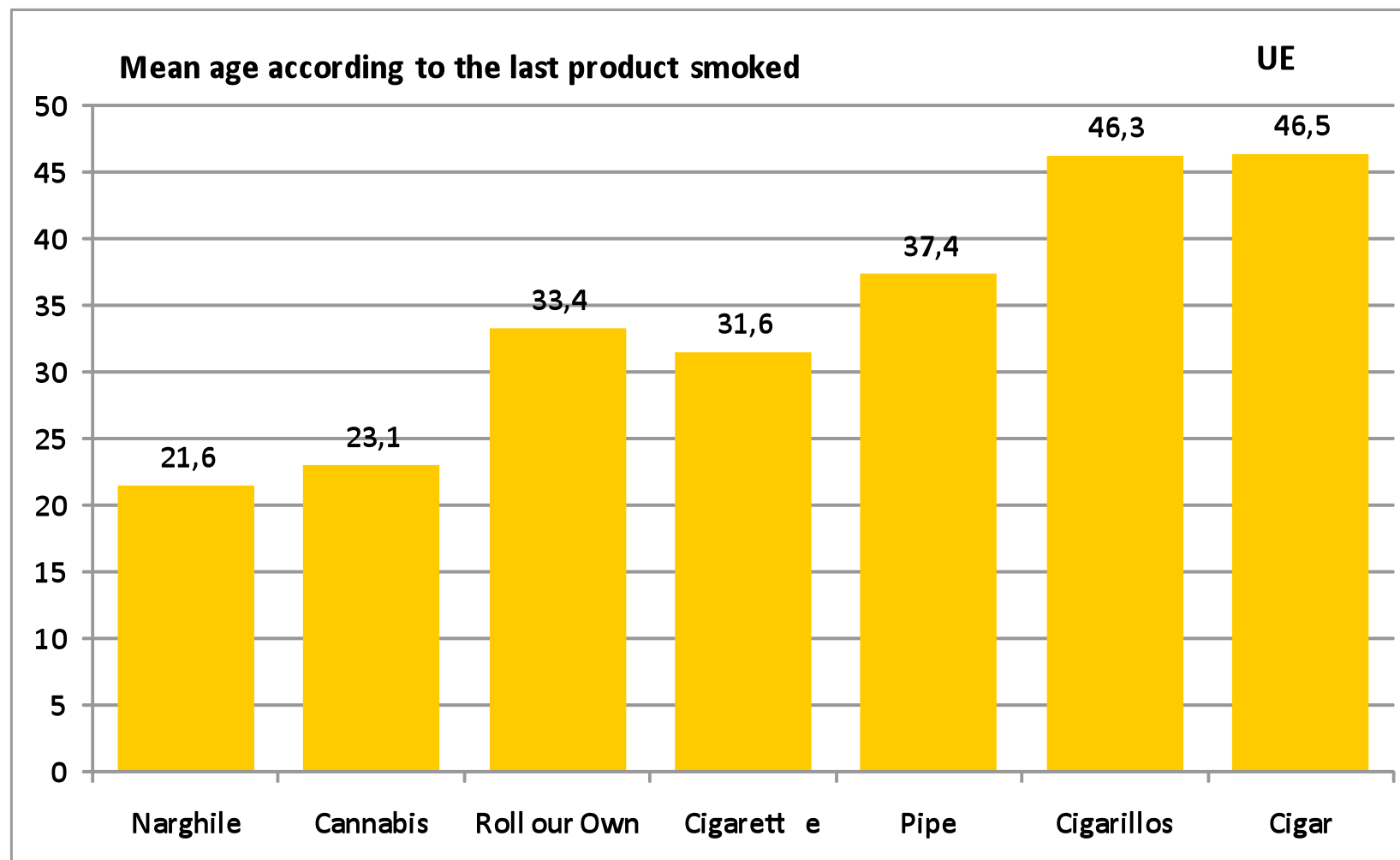
Repartition of smoker (S) and non smokers (NS) or non smoker exposed (ETS) according to countries



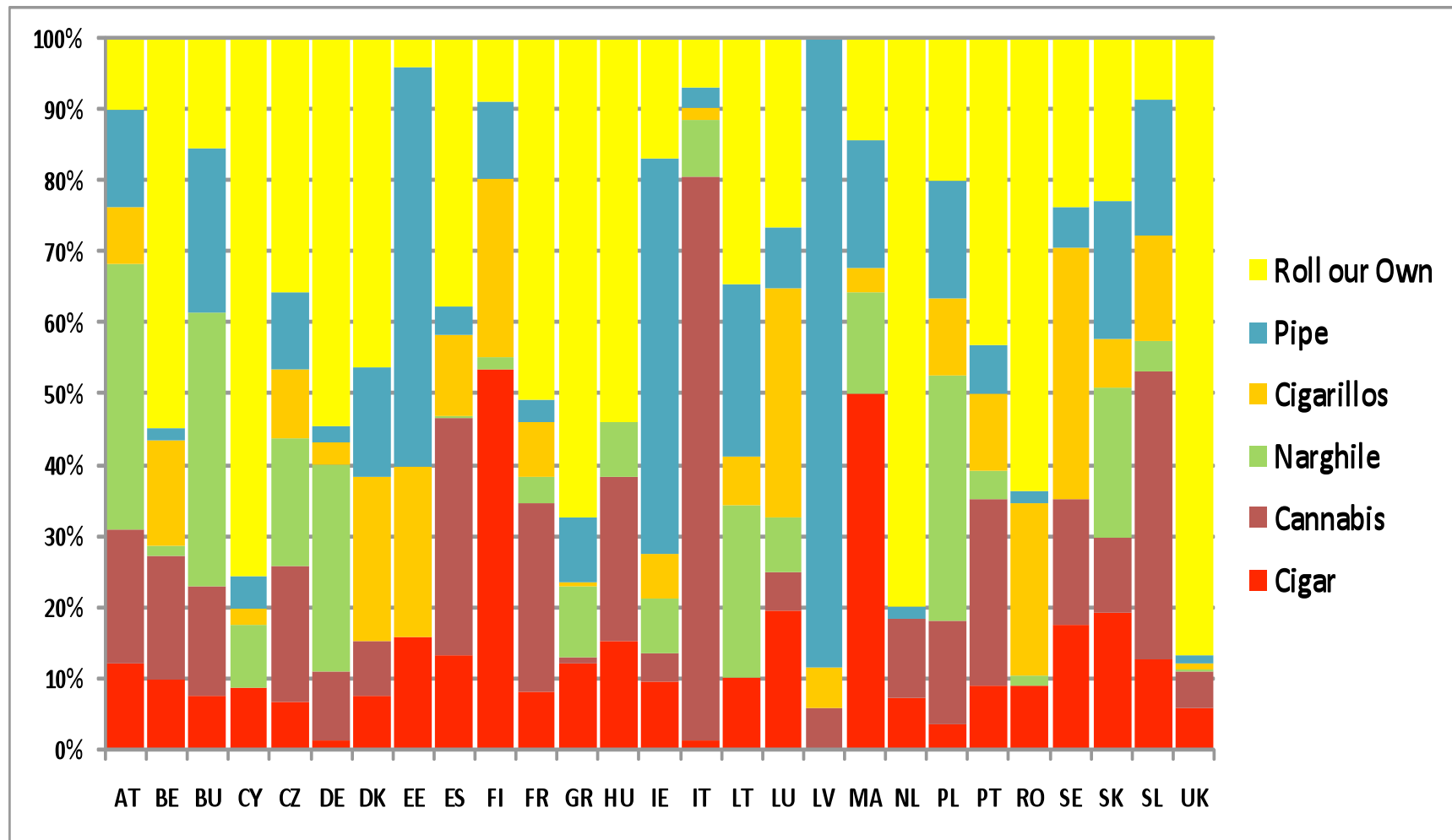
Type of tobacco product smoked in Help-COmets participants



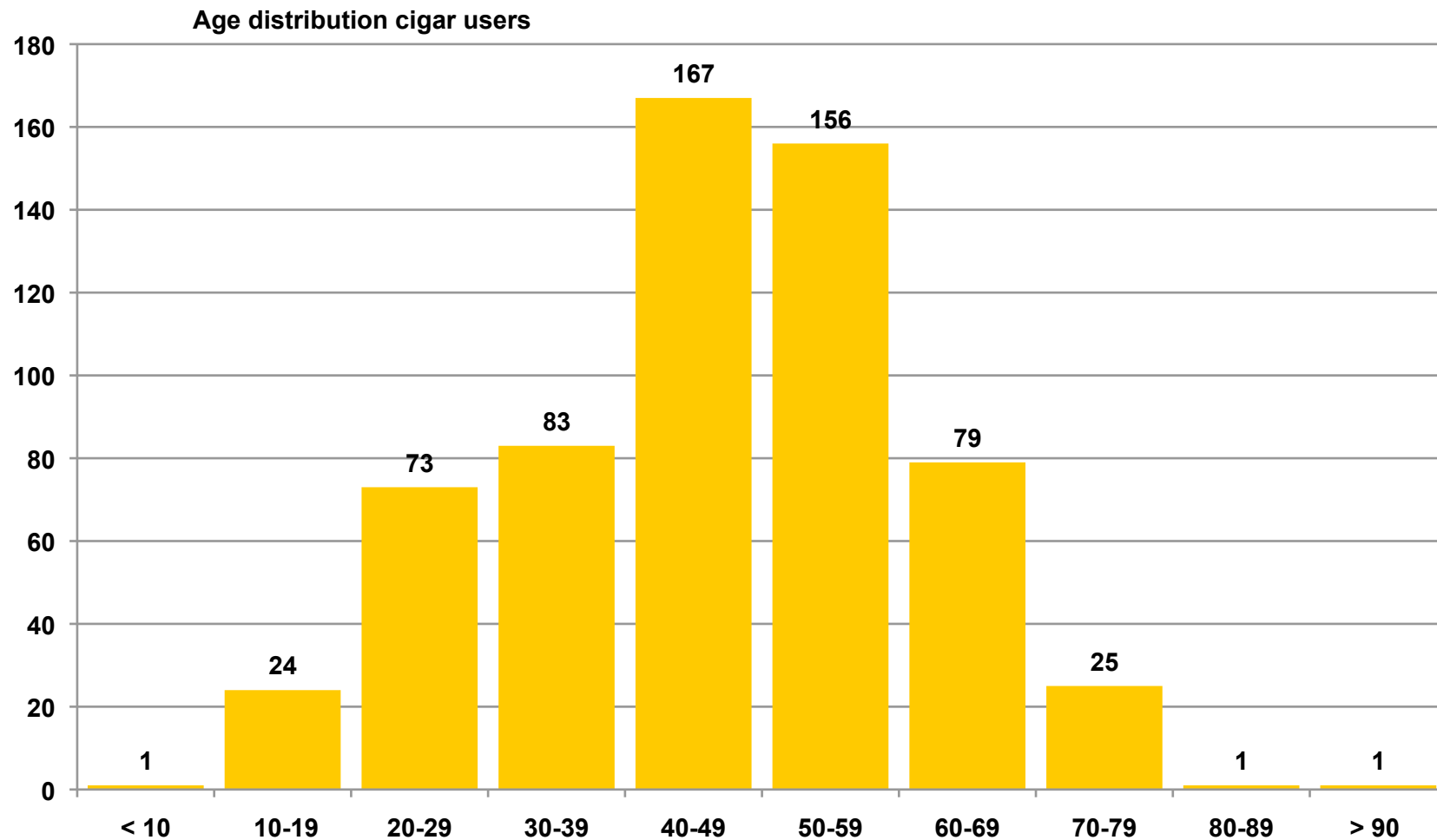
Mean age (years) of smokers according to the product smoked in Help-COmets study



Distribution of non standard cigarette smokers in Help-COmets participants in the 27 EU countries

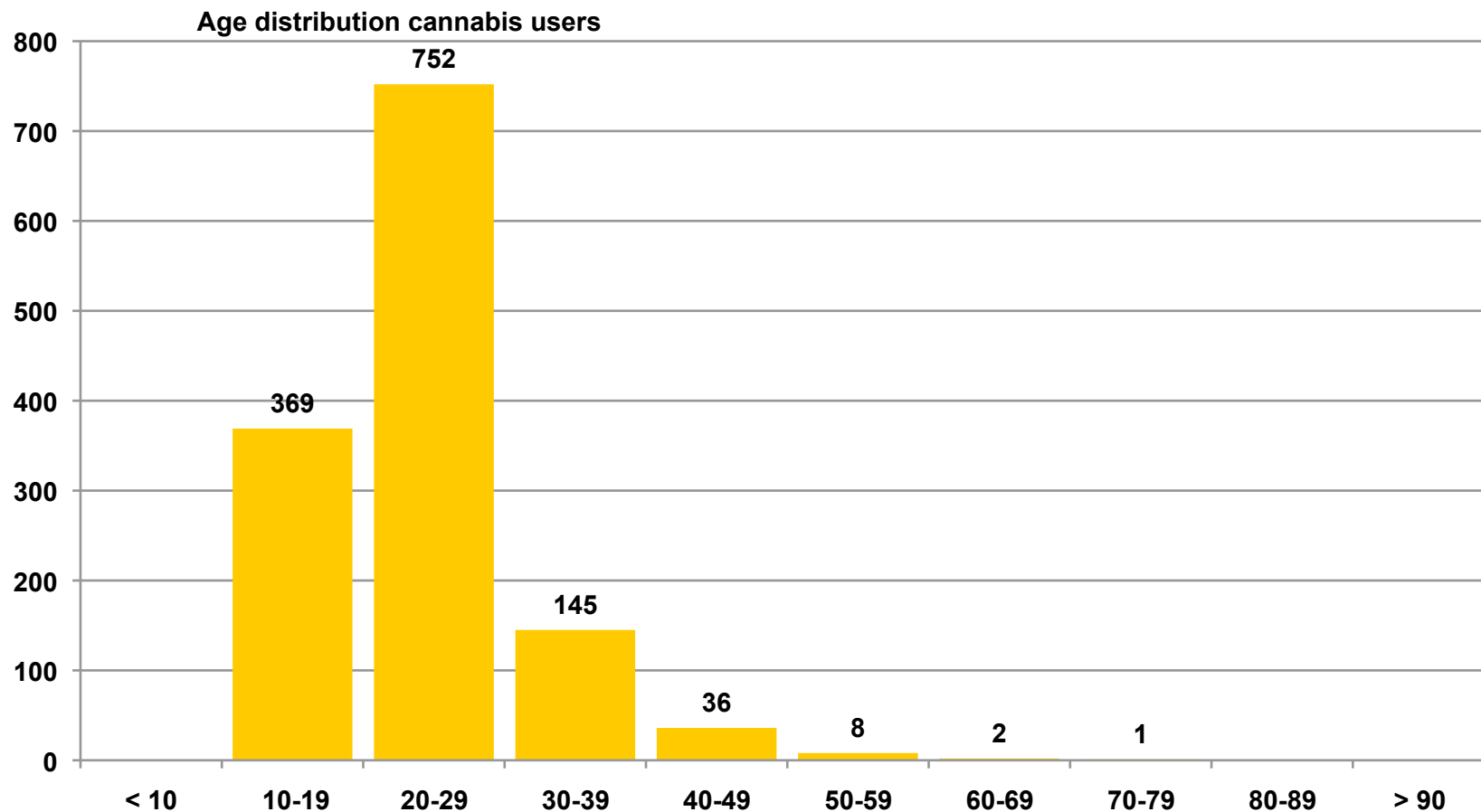


Distribution by age of cigar smokers in Help-COmets study

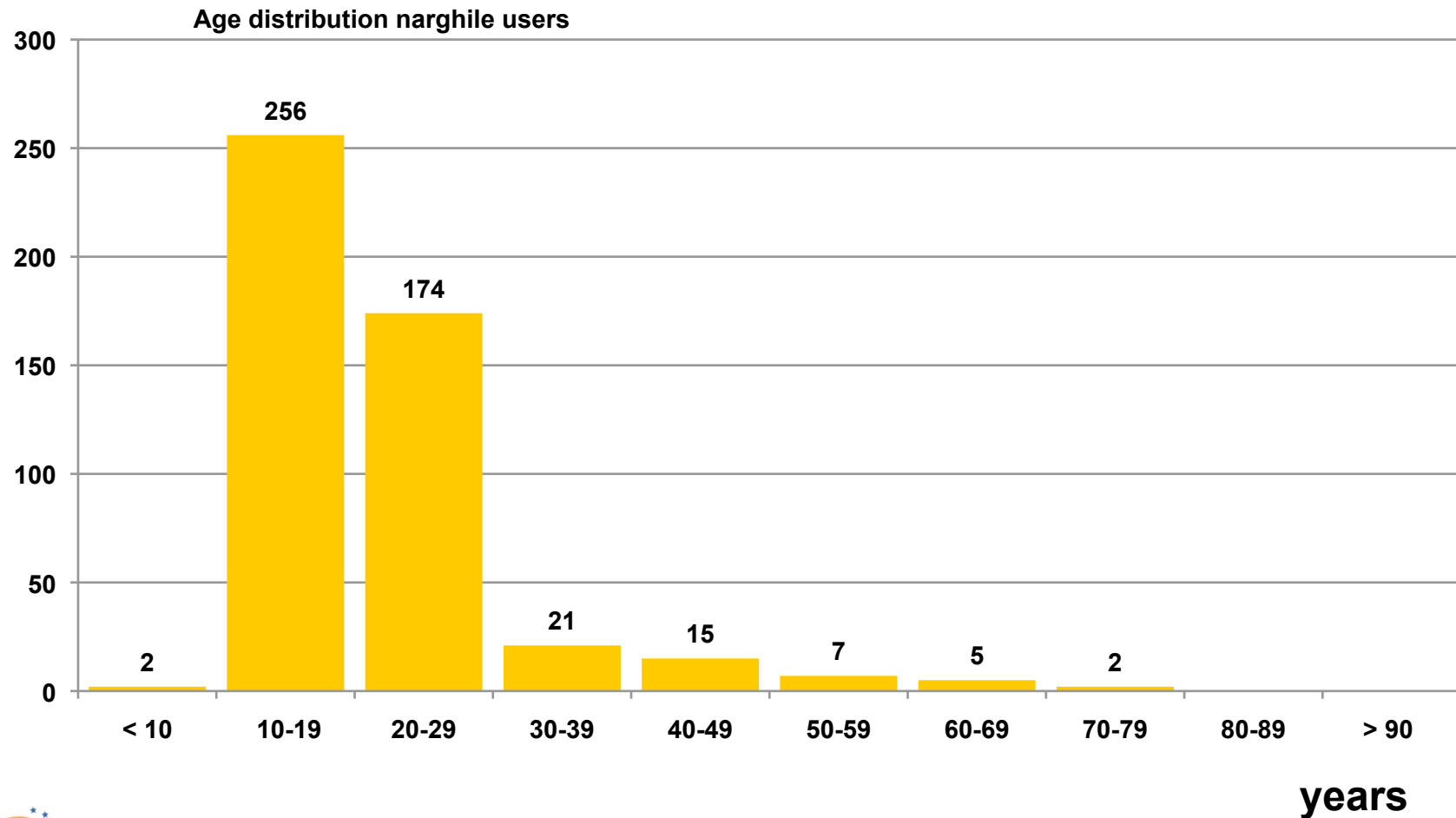


years

Distribution of age of hashish smokers in Help-COmets study



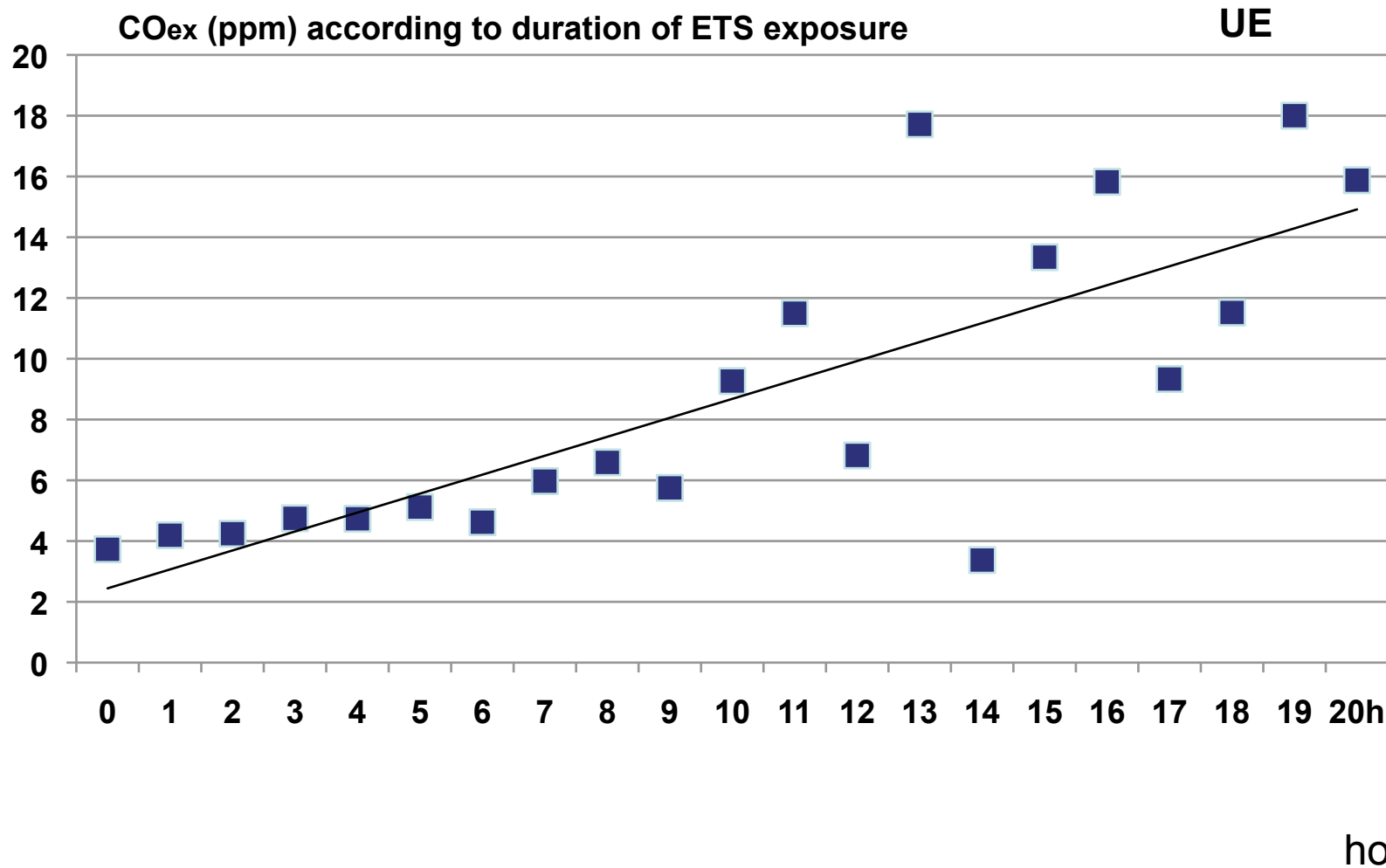
Distribution by age of water pipe smokers in Help-COmets study



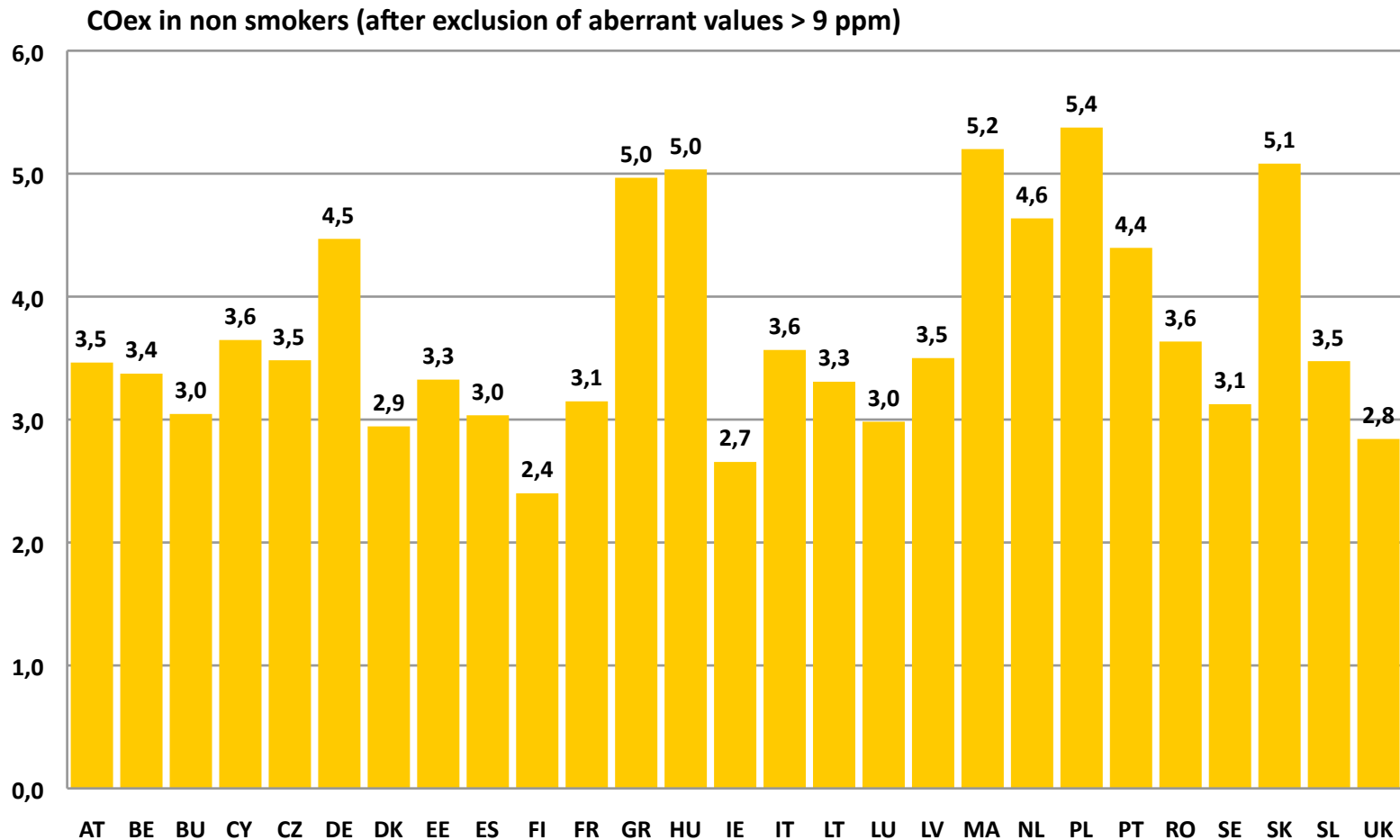
Help-COmets

CO_{ex} results in non smokers

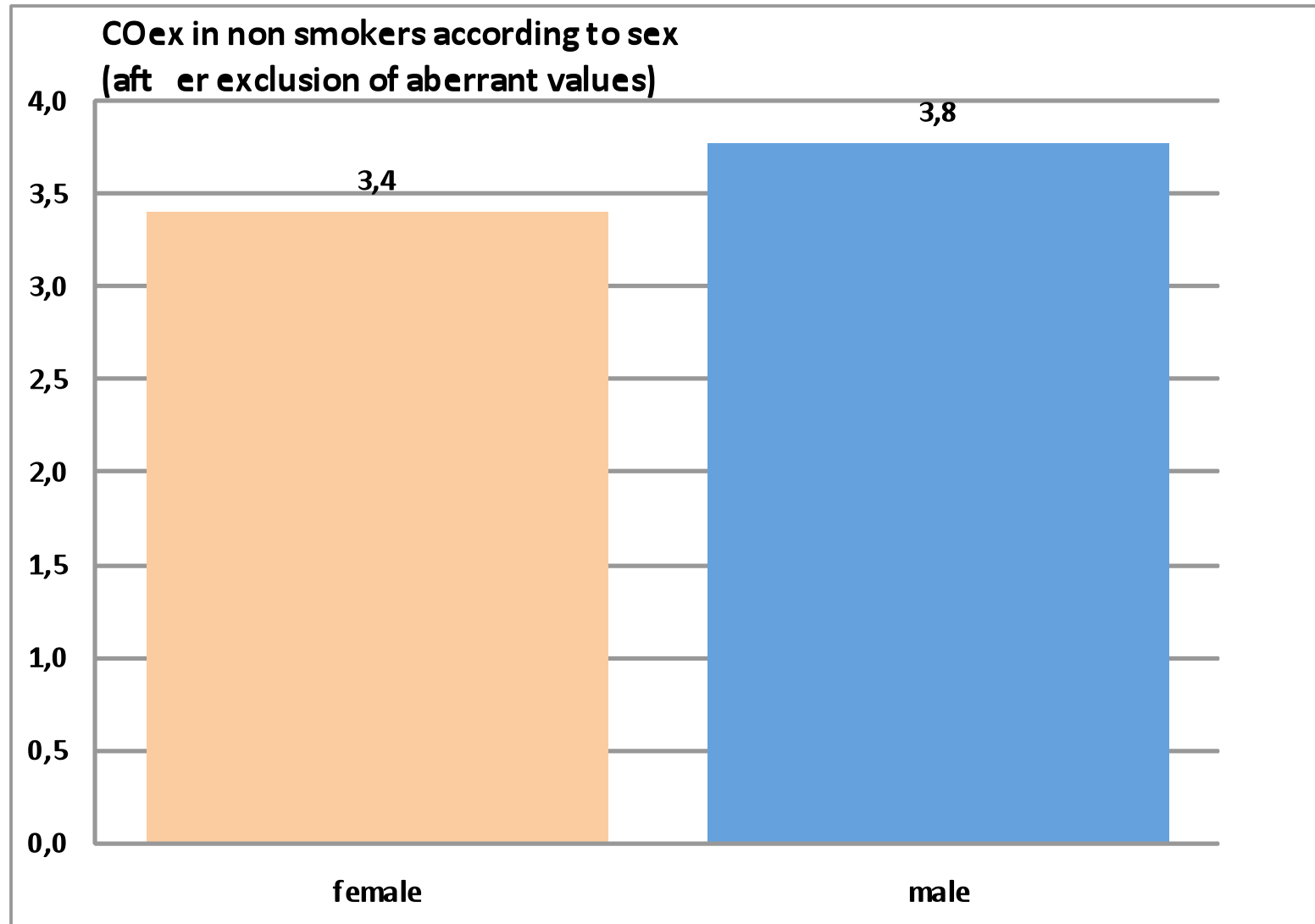
CO_{ex} in non smokers by hours of ETS



CO_{ex} in non-smoker by country

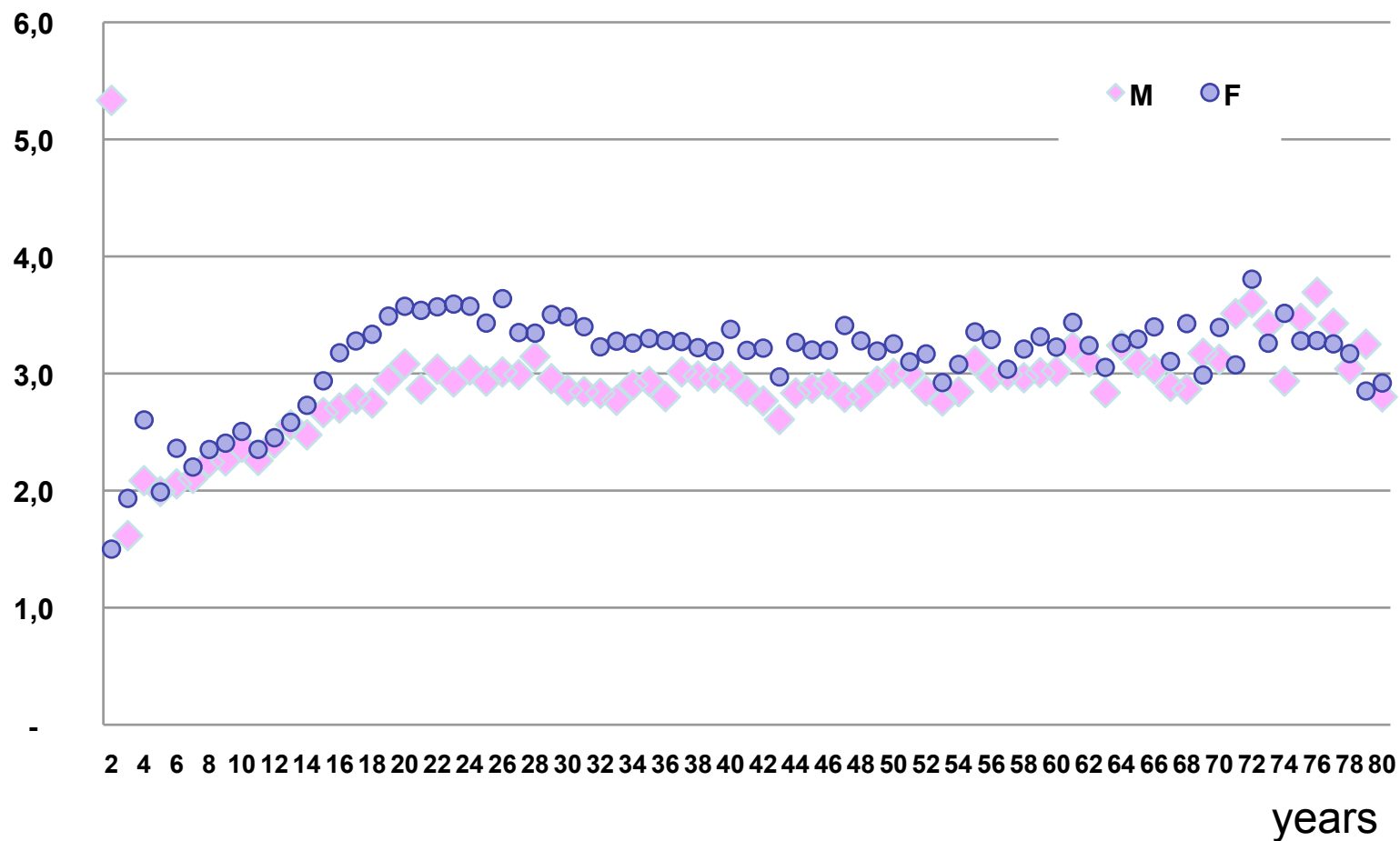


CO_{ex} in non smokers by sex

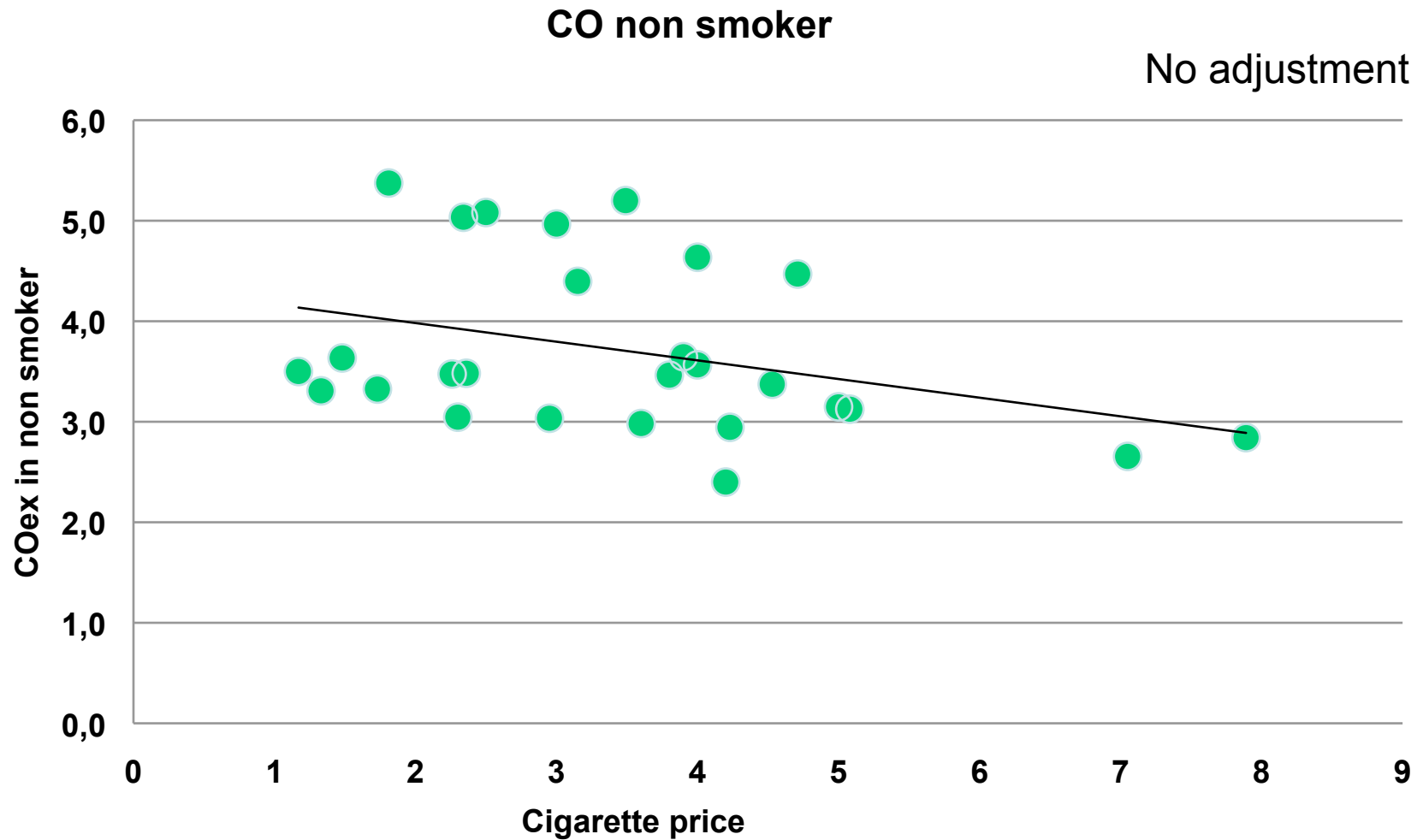


CO_{ex} in non smokers by sex and age

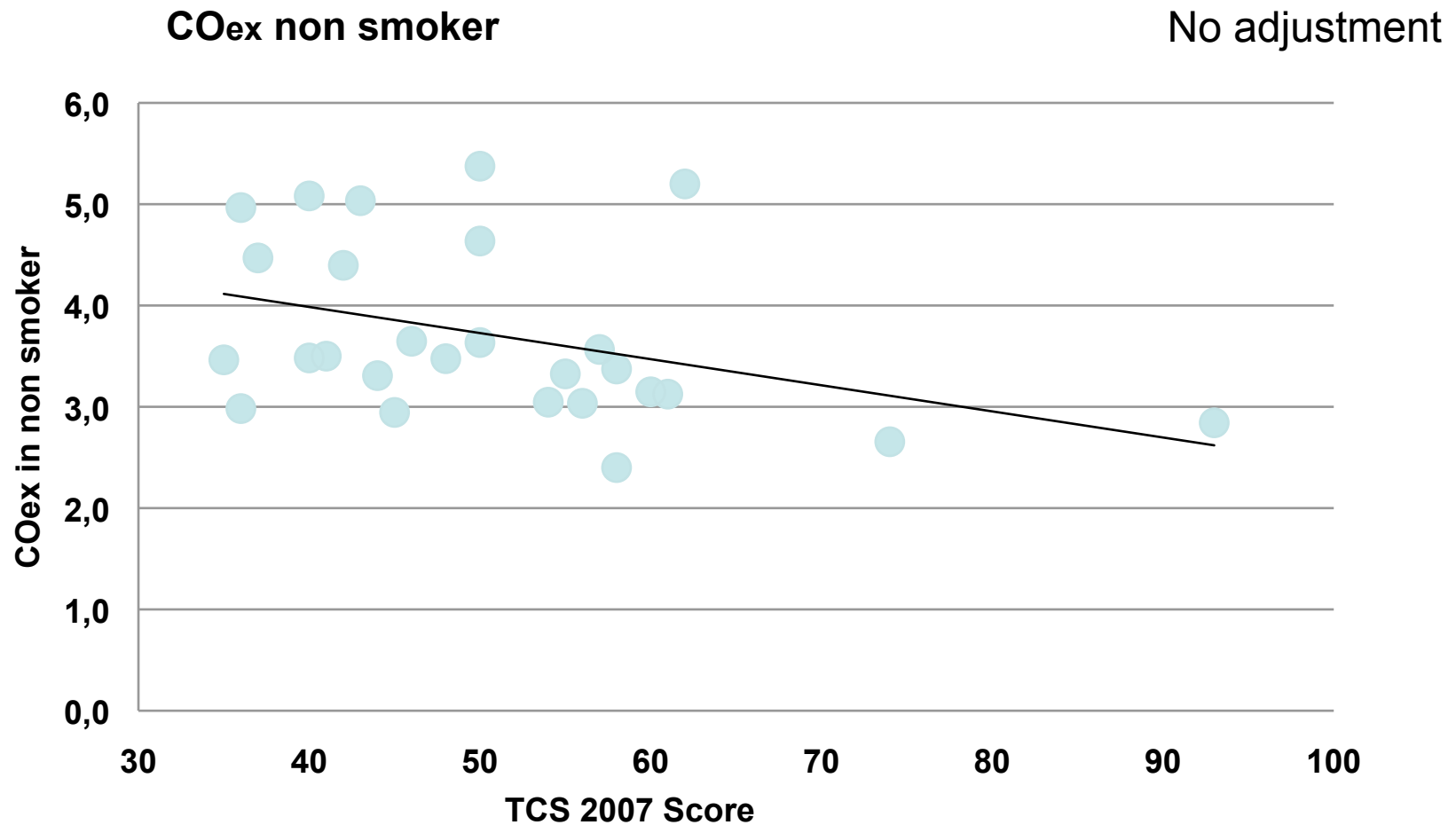
CO_{ex} according to age in non smoker male and female



Correlation between cigarettes price and CO_{ex} in non smoker in the 27 EU countries



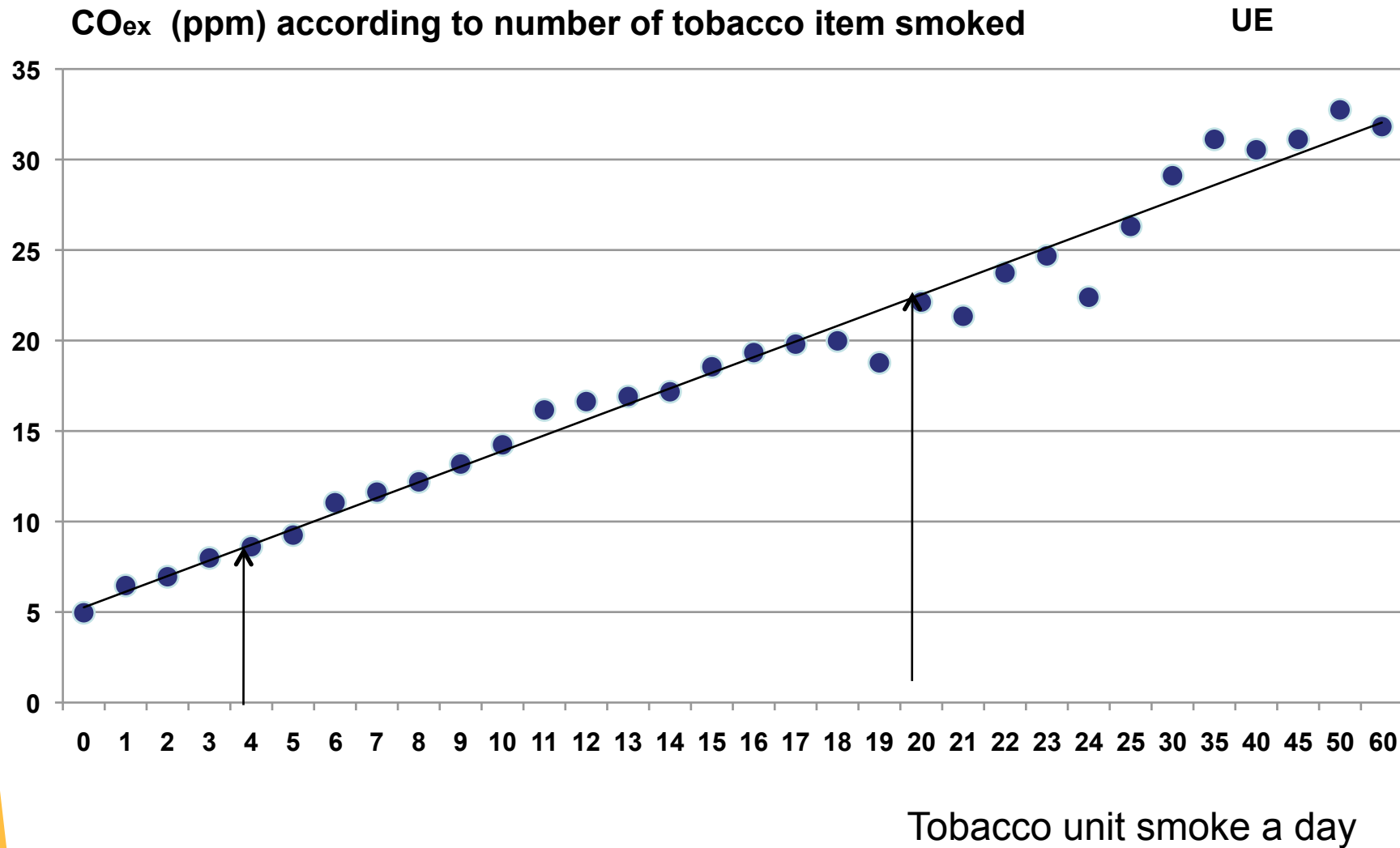
Correlation between TCS 2007 score and CO_{ex} in non smoker in the 27 EU countries



Help-COmets

CO_{ex} results in smokers

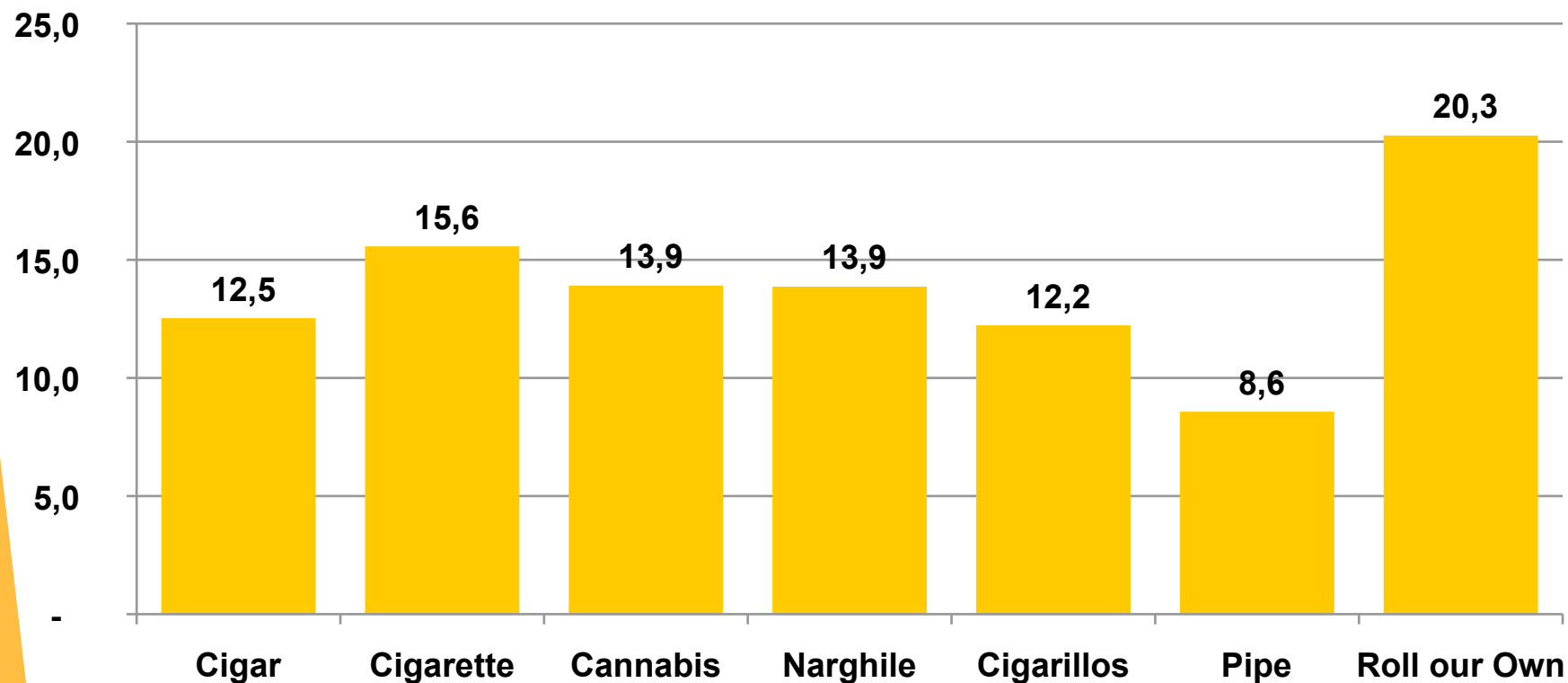
CO_{ex} in smoker according to number of tobacco units smoked



CO_{ex} by tobacco product in the Help-COmets study

UE

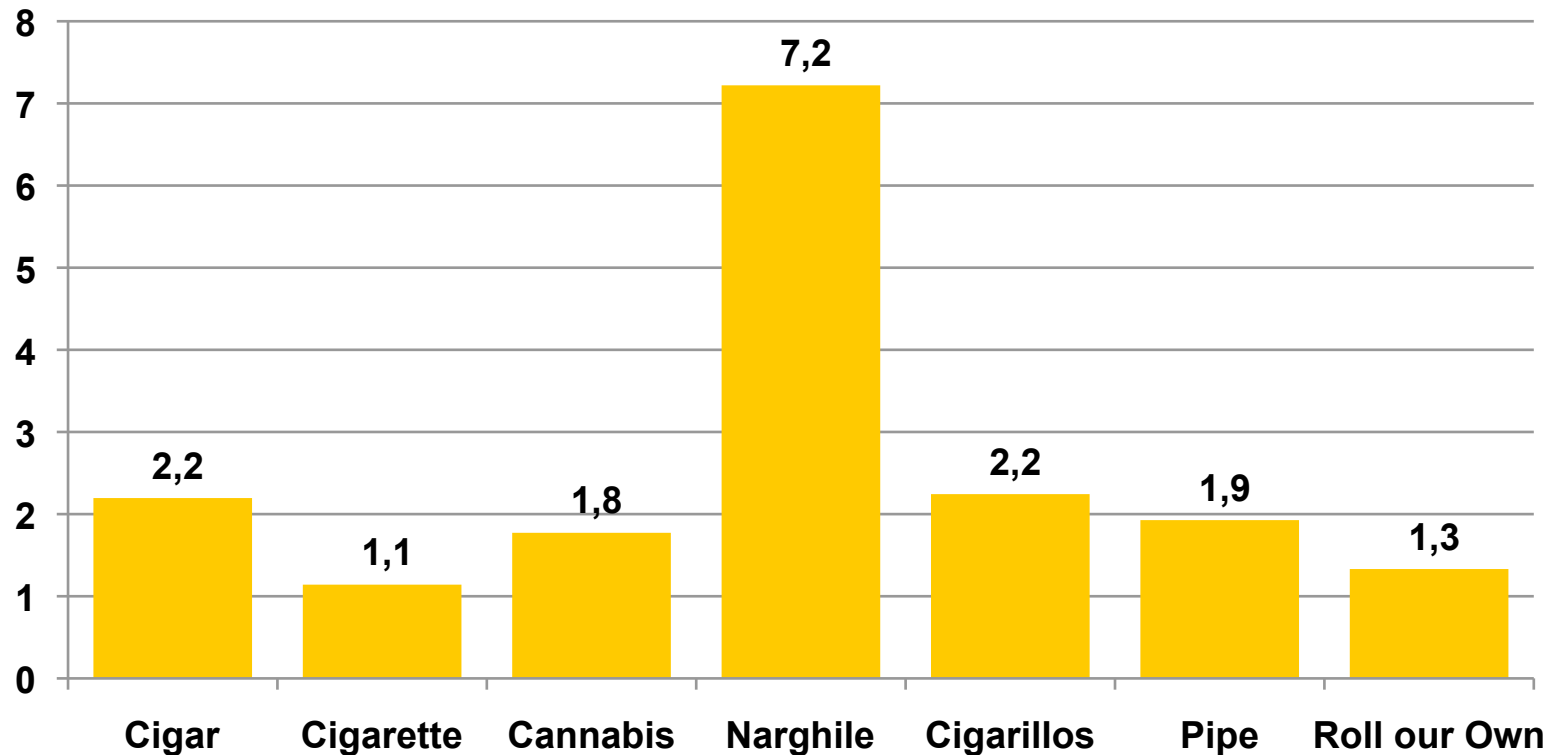
Mean CO_{ex} according to tobacco product smoked



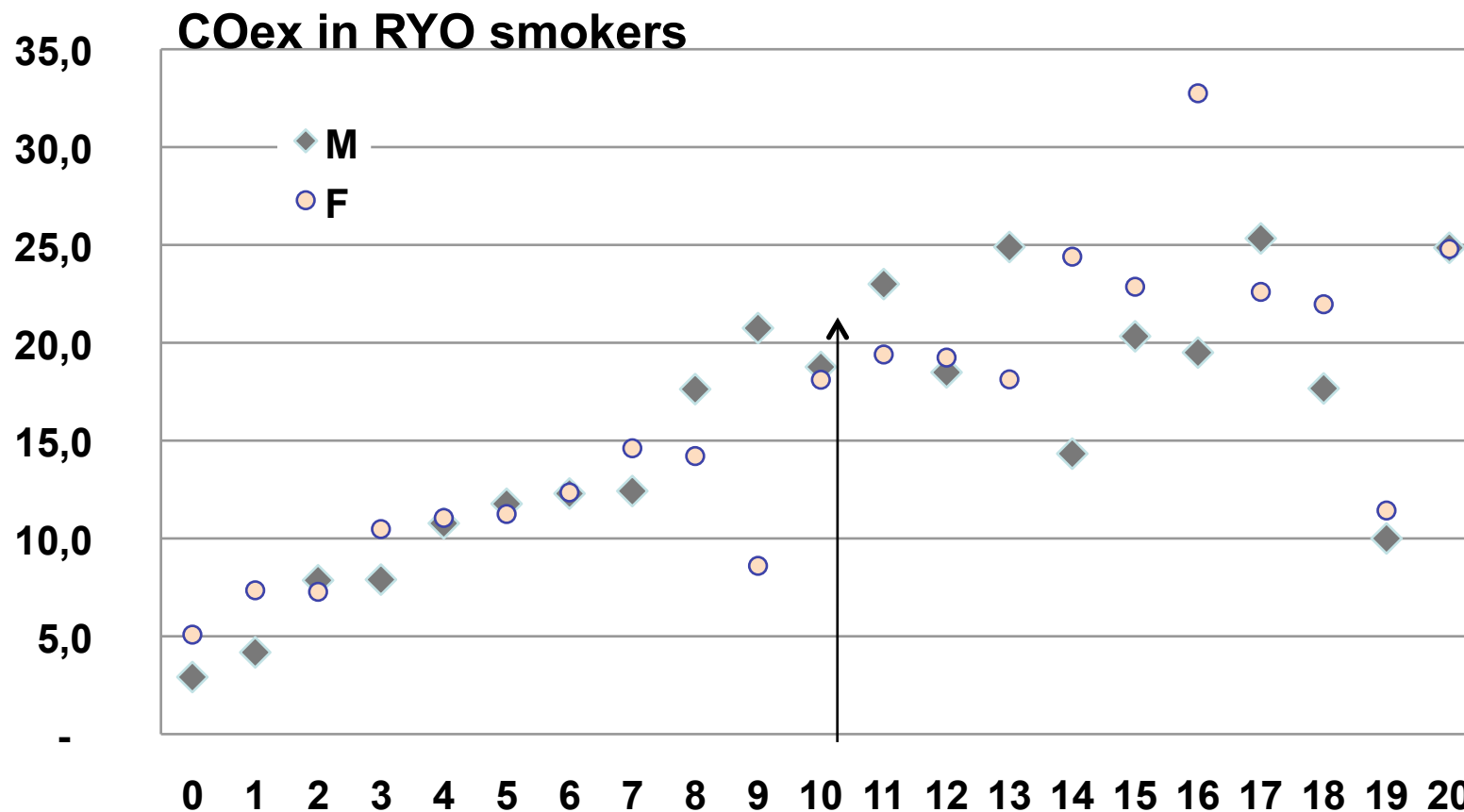
CO_{ex} per unit smoked by tobacco product in the Help-COmets study

UE

Mean CO_{ex}/item according to tobacco product smoked



CO_{ex} in roll your own cigarette smokers in the Help-COmets study



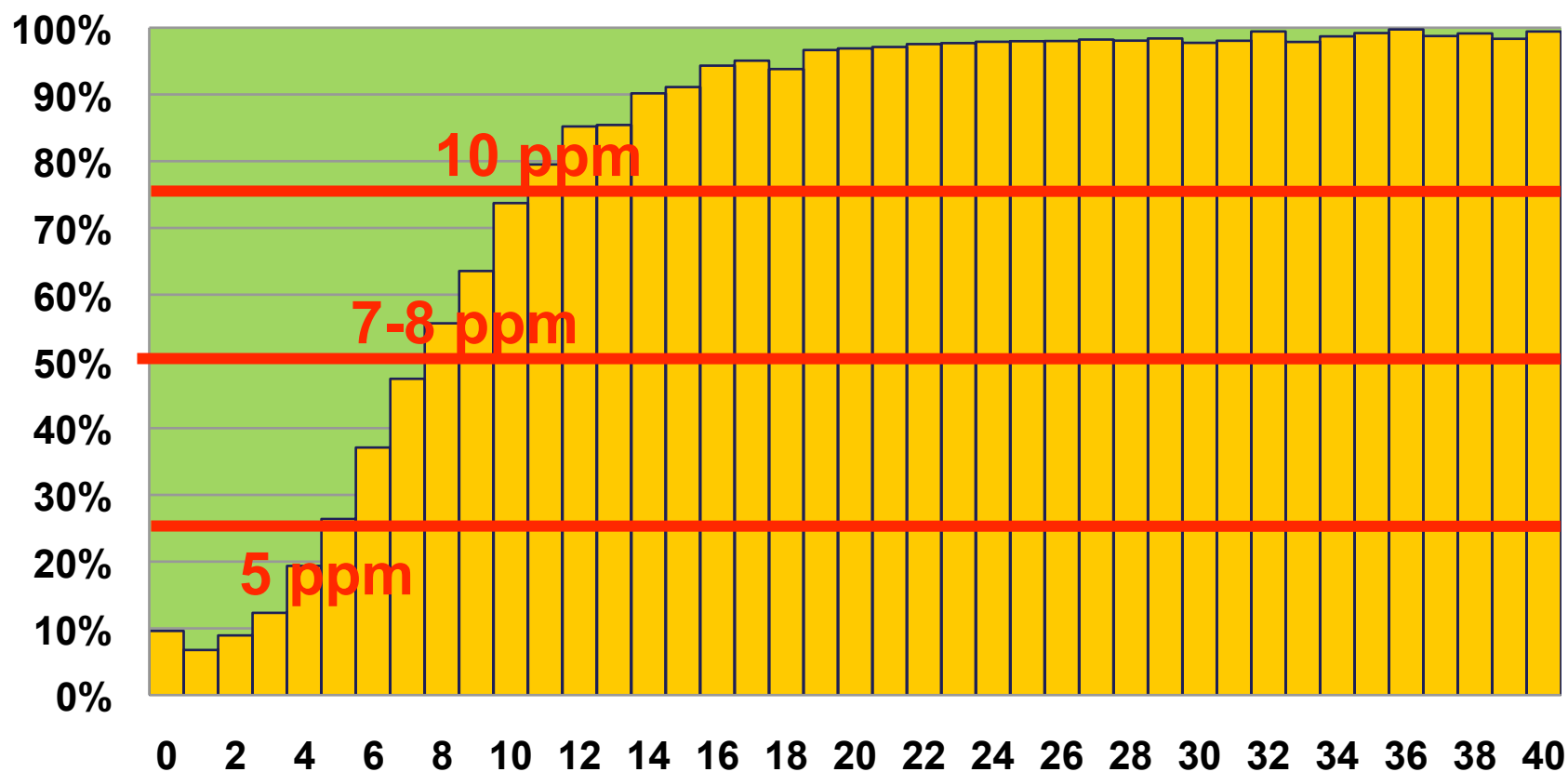
Number of RYO/
24h

Help-COmets

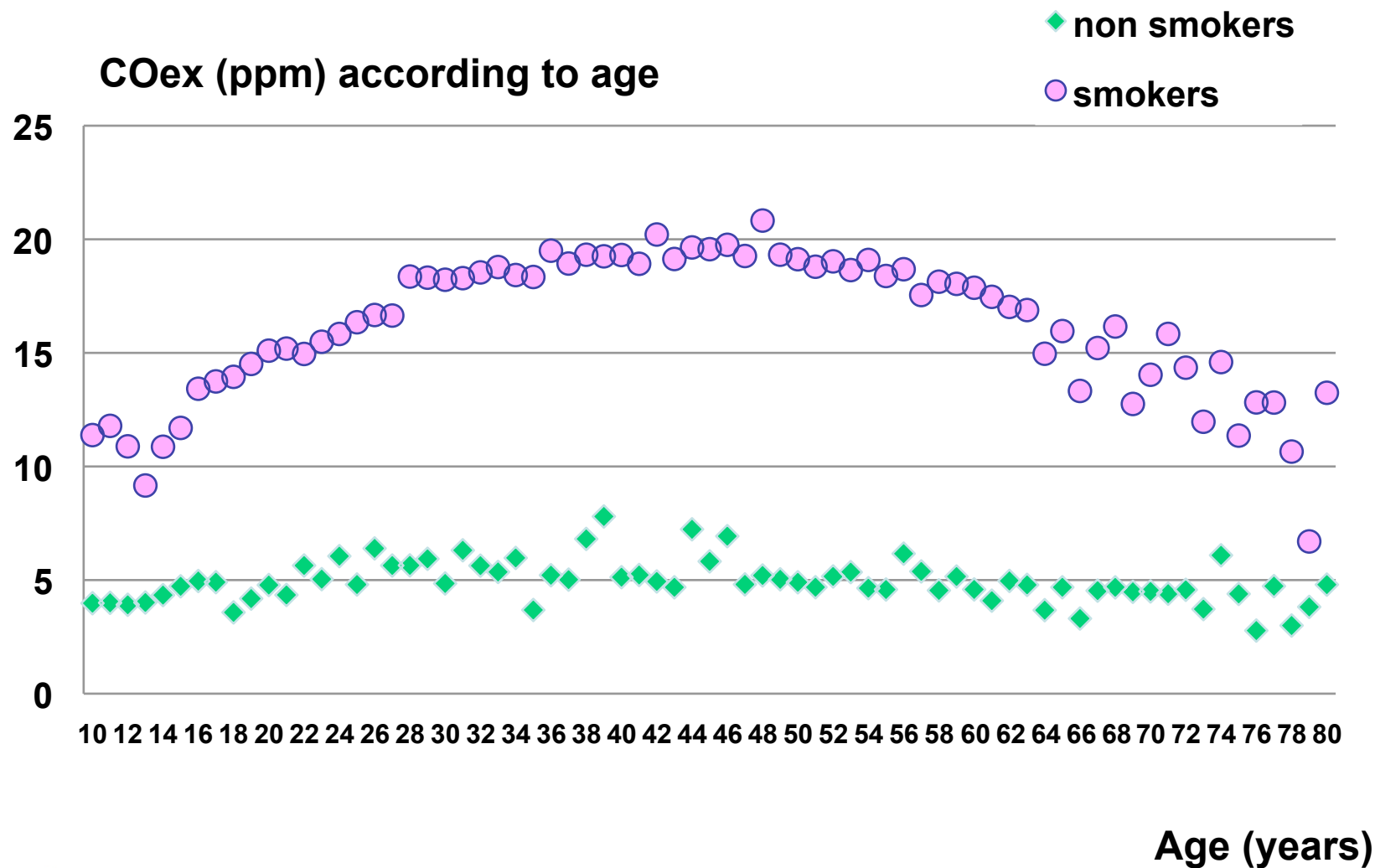
**Comparison of
CO_{ex} results
in non smokers
and
in smokers**

Distribution of smoking status according CO_{ex} in the Help-COmets study

Rate of smokers for each CO_{ex} categorie from 1 to 40 ppm UE



Mean CO_{ex} in smokers and non smokers from 10 to 80 years old

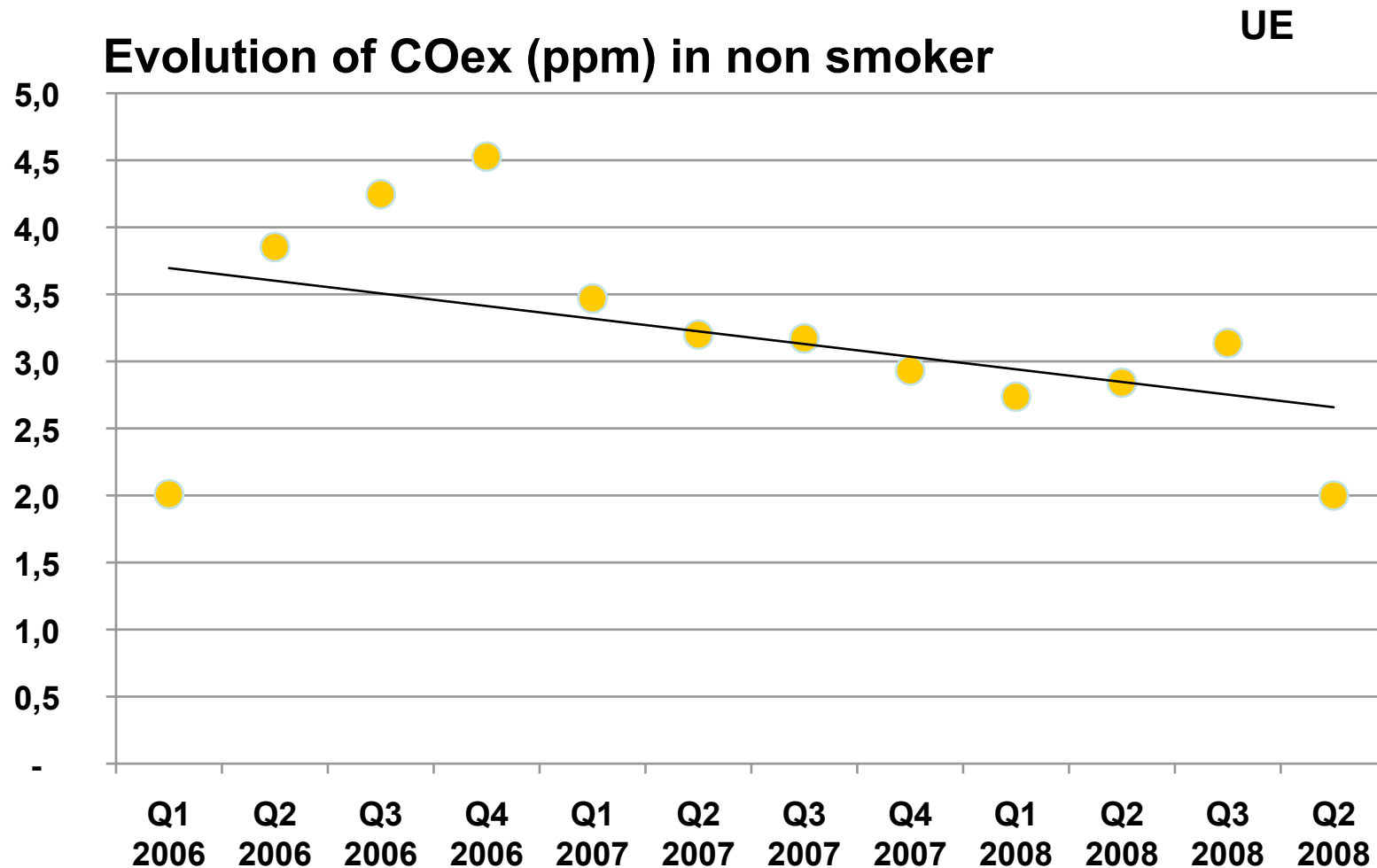


Help-COmets

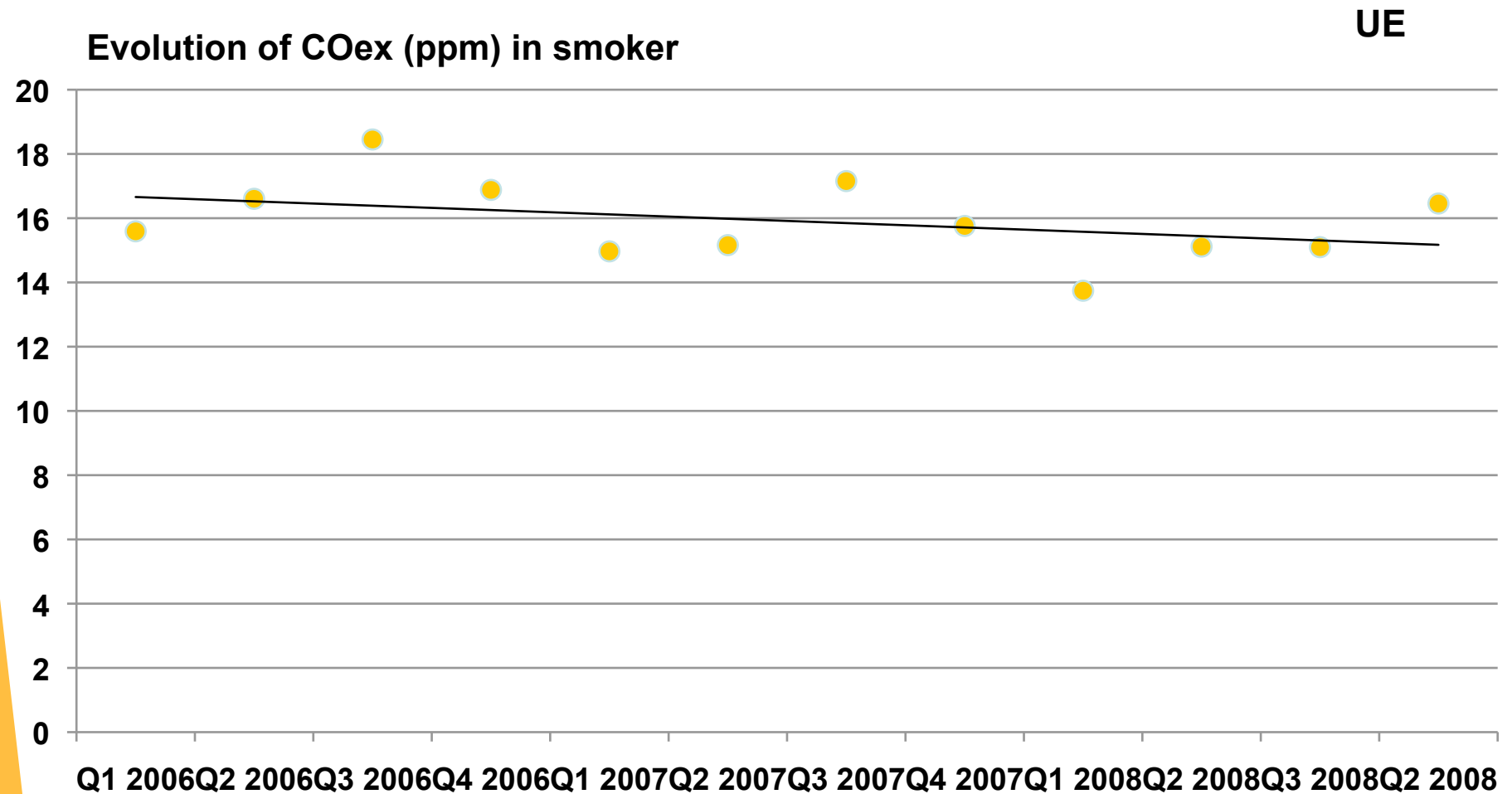
Evolution 2006-2008

CO_{ex} results

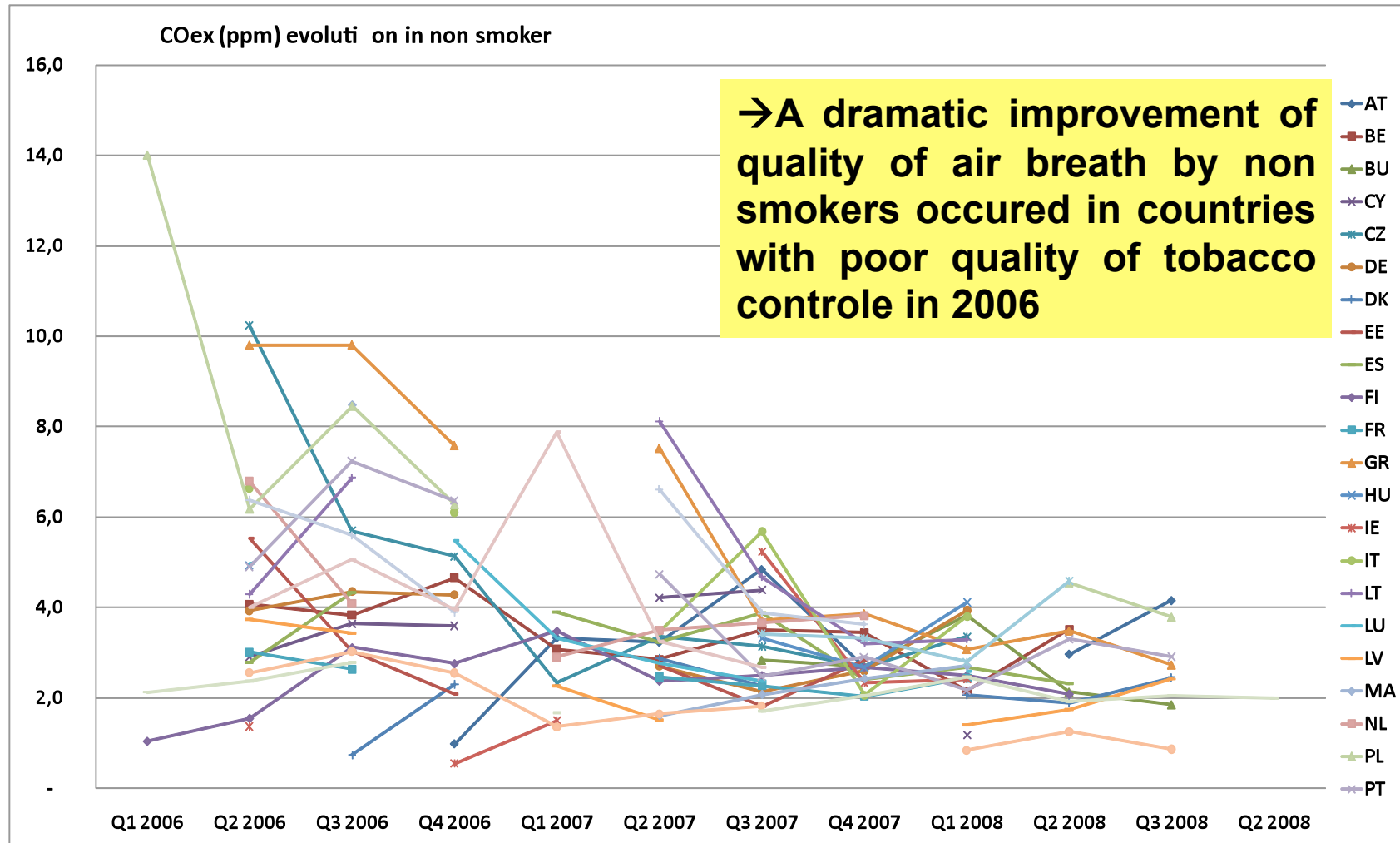
Evolution of COex in non smokers from 2006 to 28008)



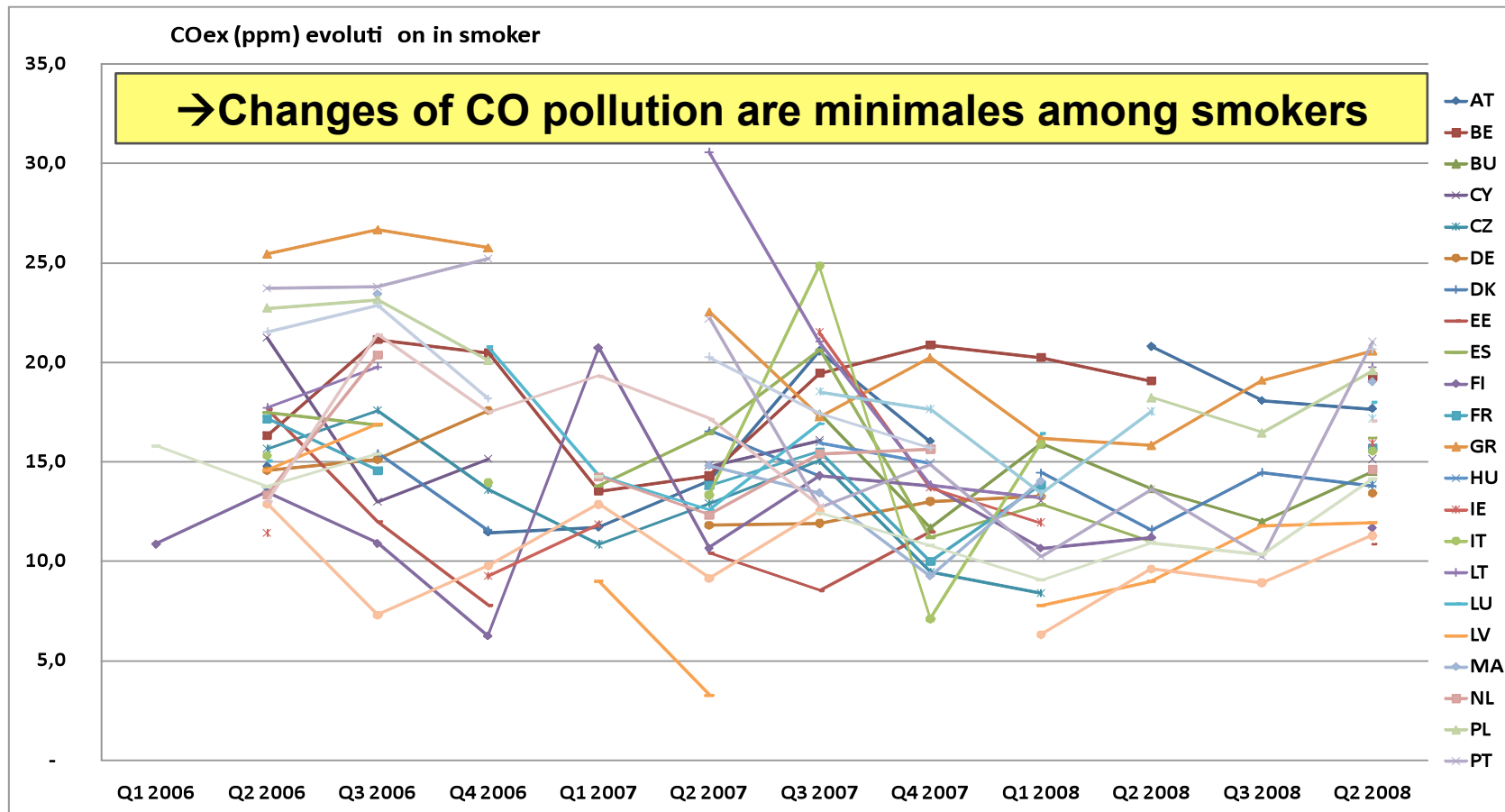
Evolution of COex in smokers from 2006 to 2008



Evolution of Coex by country in non smokers from 2006 to 2008 (Countries results)

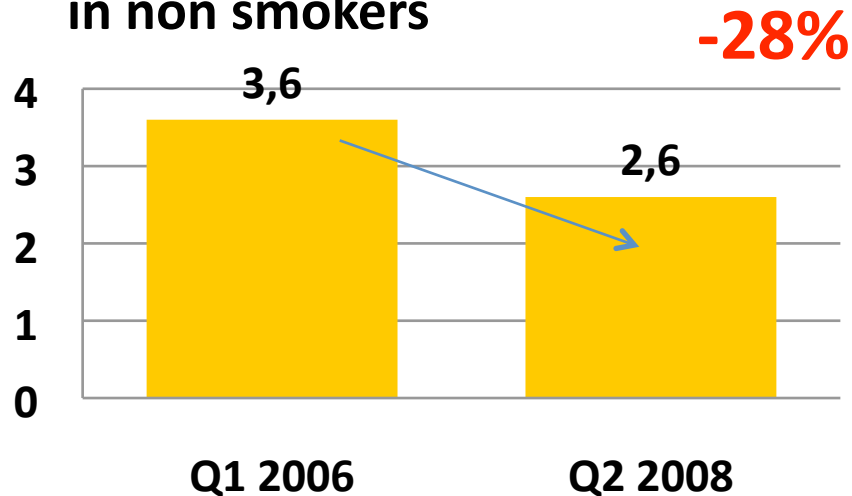


Evolution of COex by country in smokers from 2006 to 2008 (Countries results)



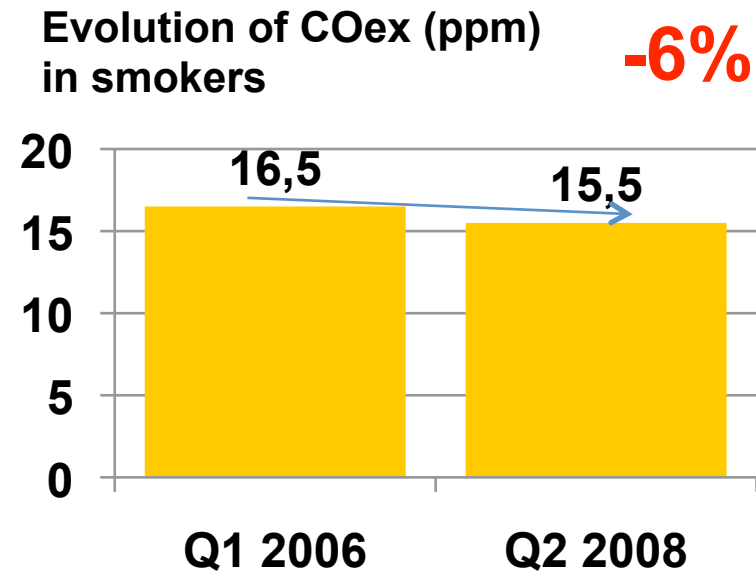
Evolution of COex in non smokers and in smokers from 2006 to 28008

Evolution of COex (ppm)
in non smokers



Decrease of enviromental tobacco smoke is the best explanation of the decrease of CO pollution of lung of smoker and non smoker European citizens

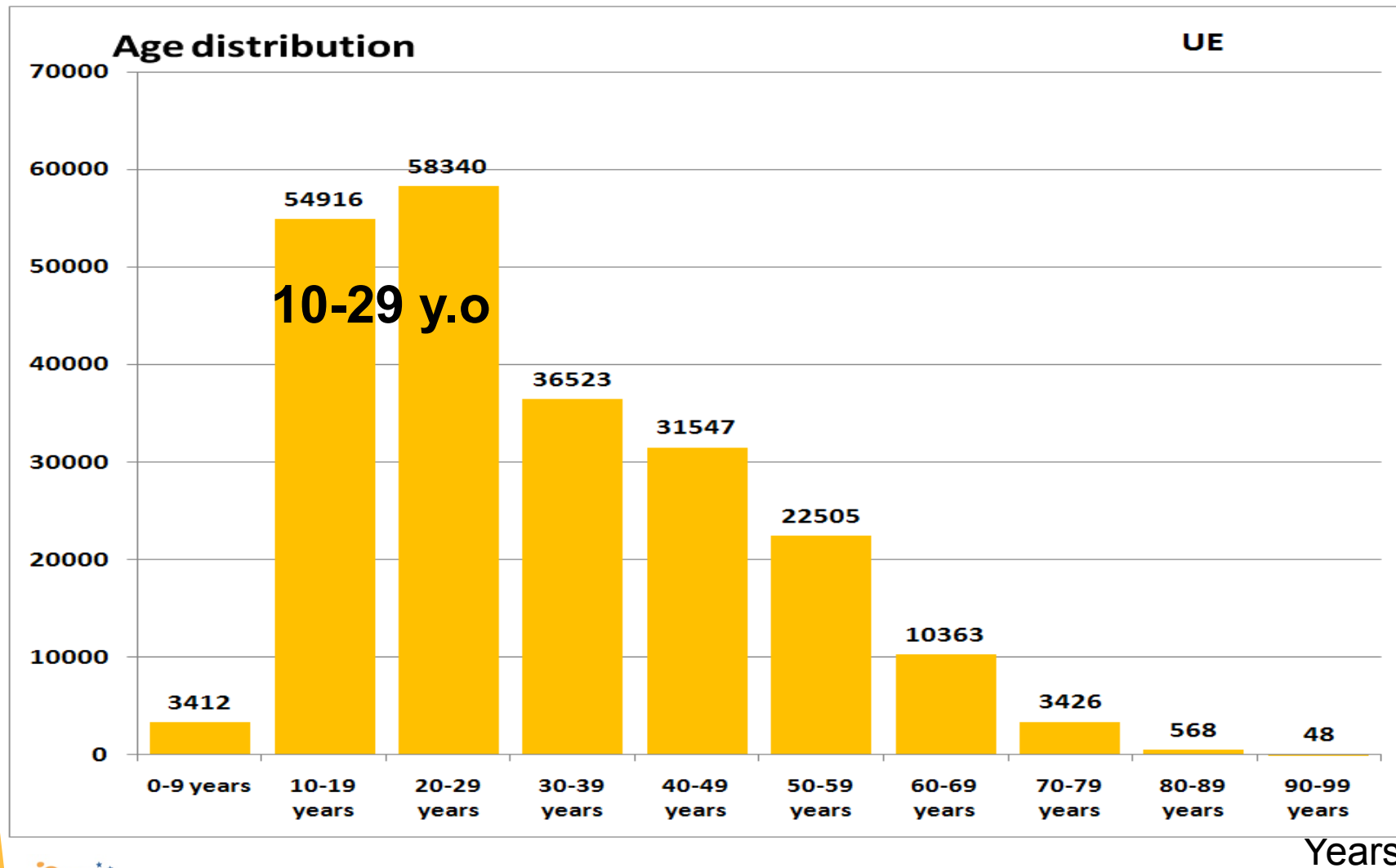
Evolution of COex (ppm)
in smokers



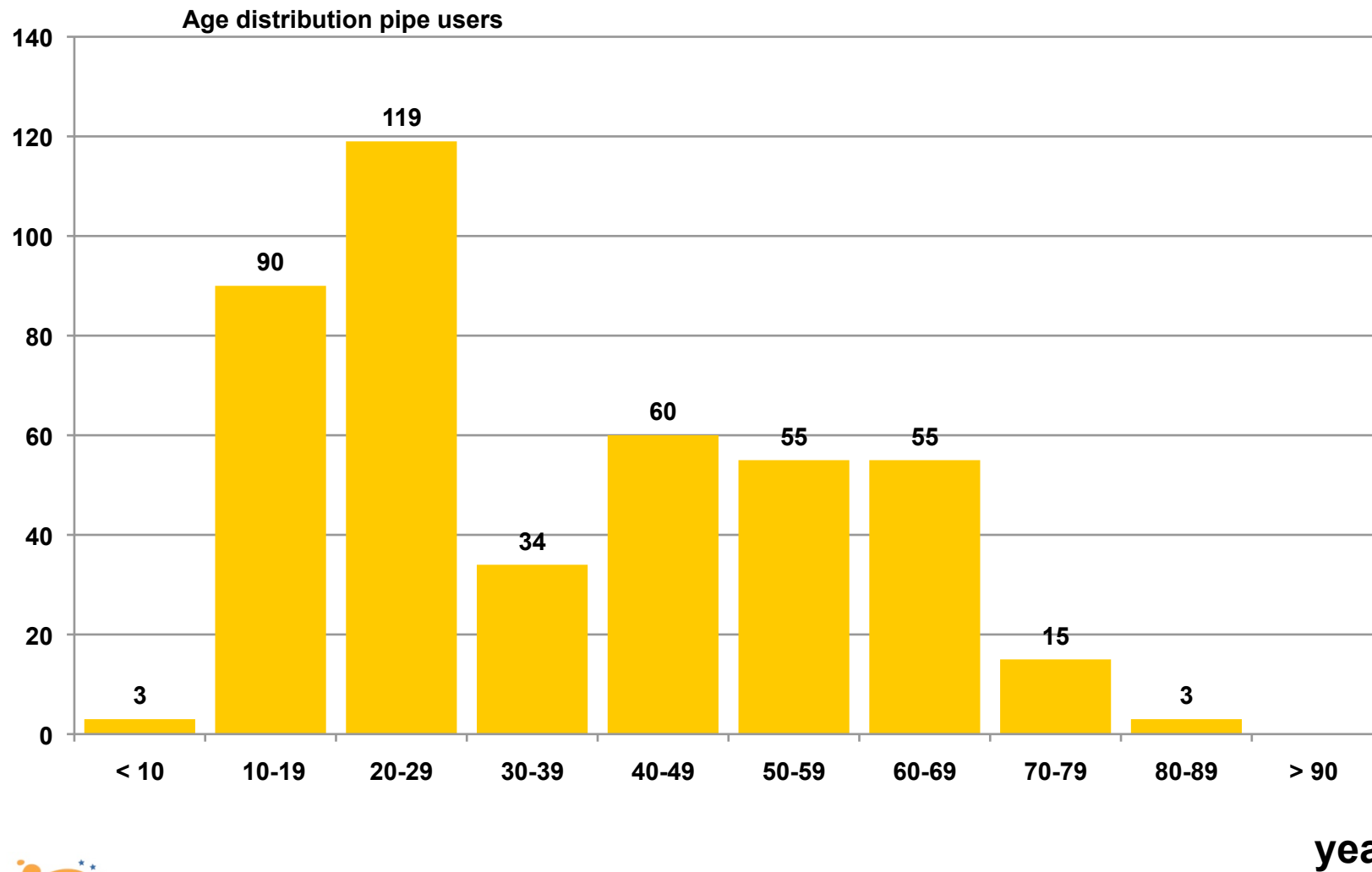
Conclusion

- **More 1/2000 European adults participate to Help COmETS events.**
- **The CO_{ex} in non smoker present a 28% decrease from the beginning (2006) to the end (2008) of the Help campaign, when many UE countries improved tobacco control and the ETS indoor pollution decrease in Europe.**
- **Countries with poor tobacco control scores experienced the highest CO_{ex} pollution in non smoker population.**
- **→ Measurement of CO_{ex} appear as an useful tool to prevent smoke exposure in smokers and non smokers. This campaign may have participate (with others) to denormalize tobacco use in Europe and to decrease inequalities of air quality between European citizen.**

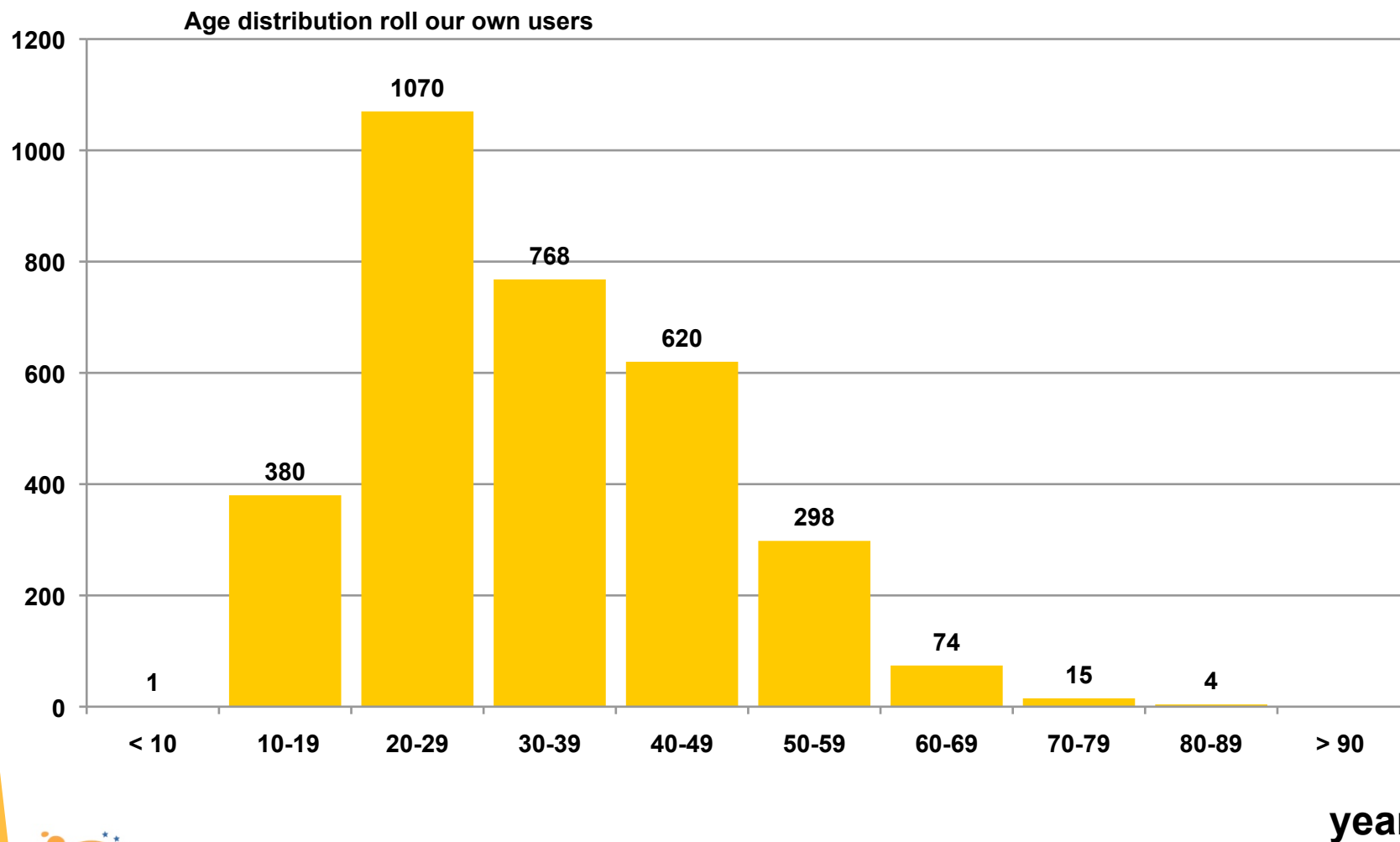
Distribution by age and sex of Help-COmets participants



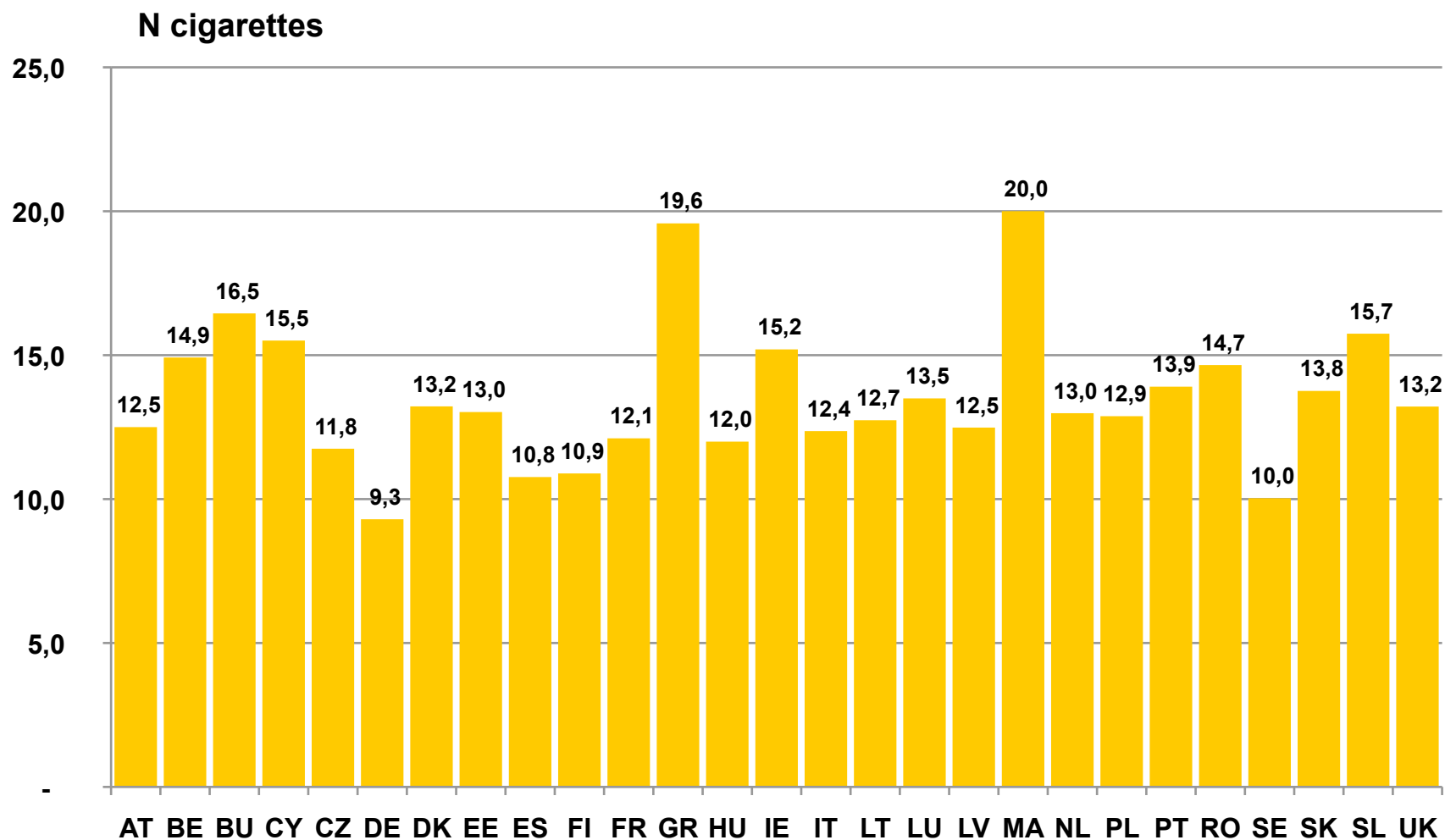
Distribution by age of pipe smokers in Help-COmets study



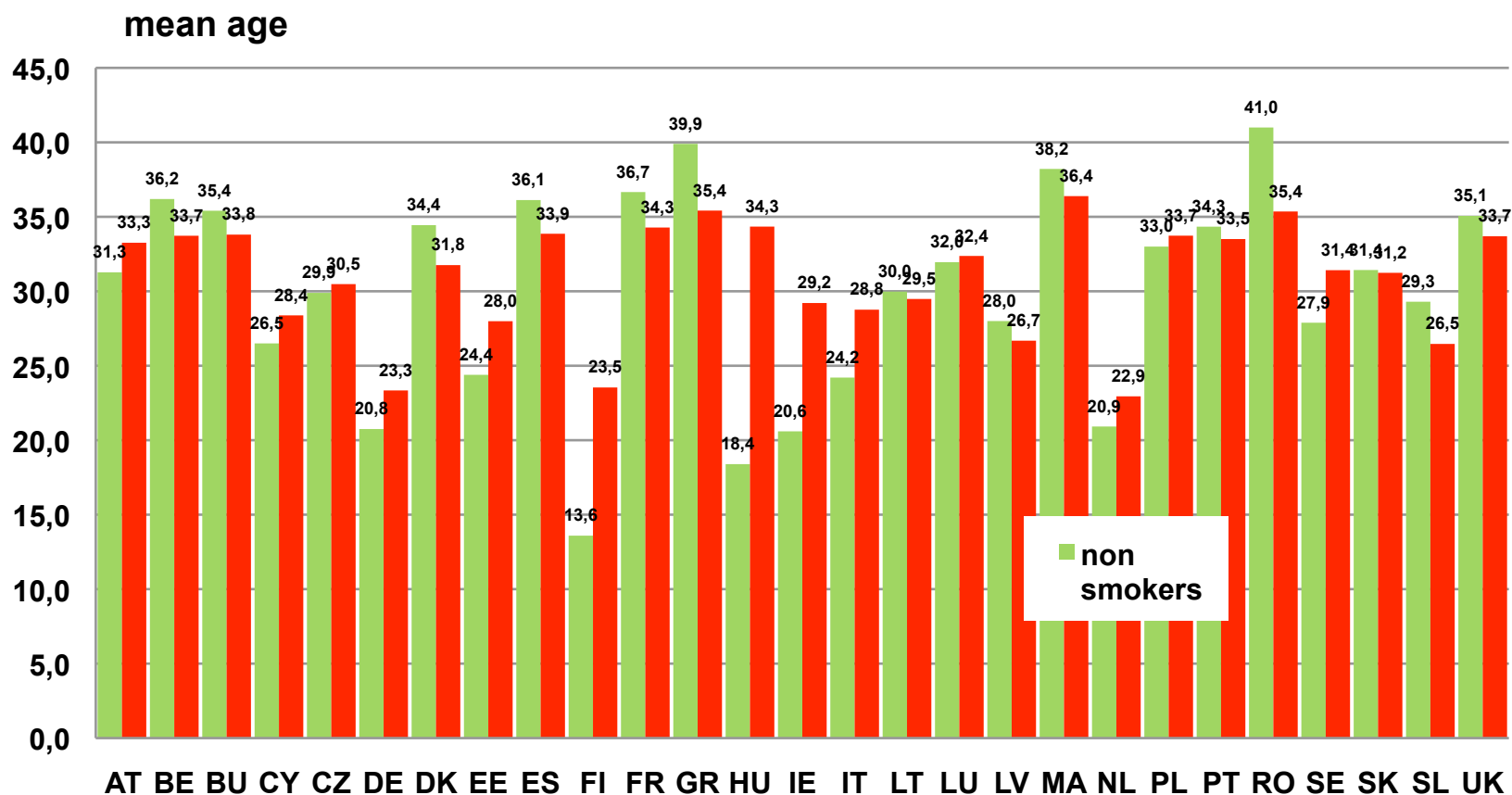
Distribution by age of roll your own cigarettes smokers in Help-COmets study



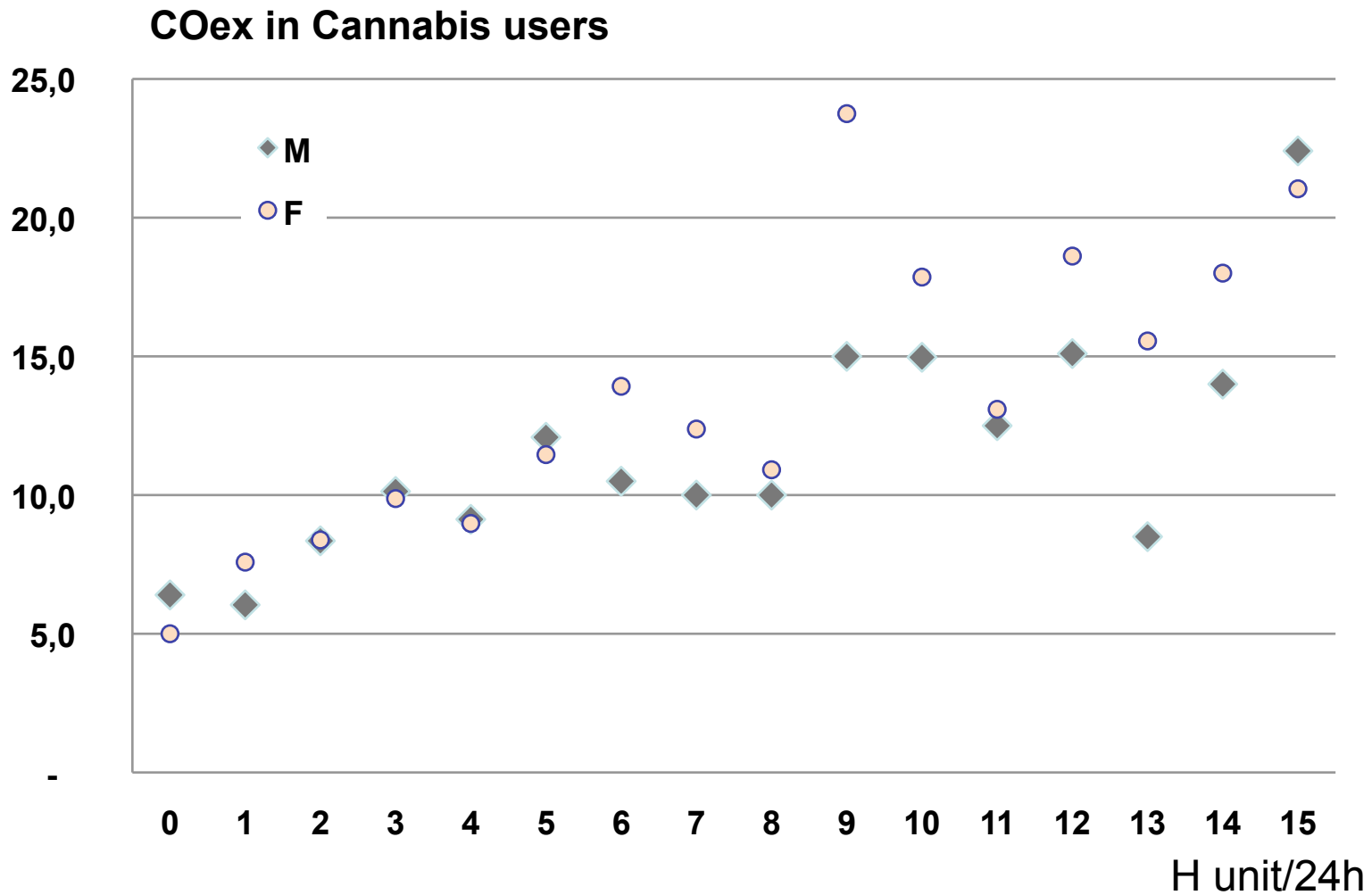
Mean number of tobacco units smoked by day by smoker in Help-COmets study



Mean age (years) according to smoking status in the Help-COmets study

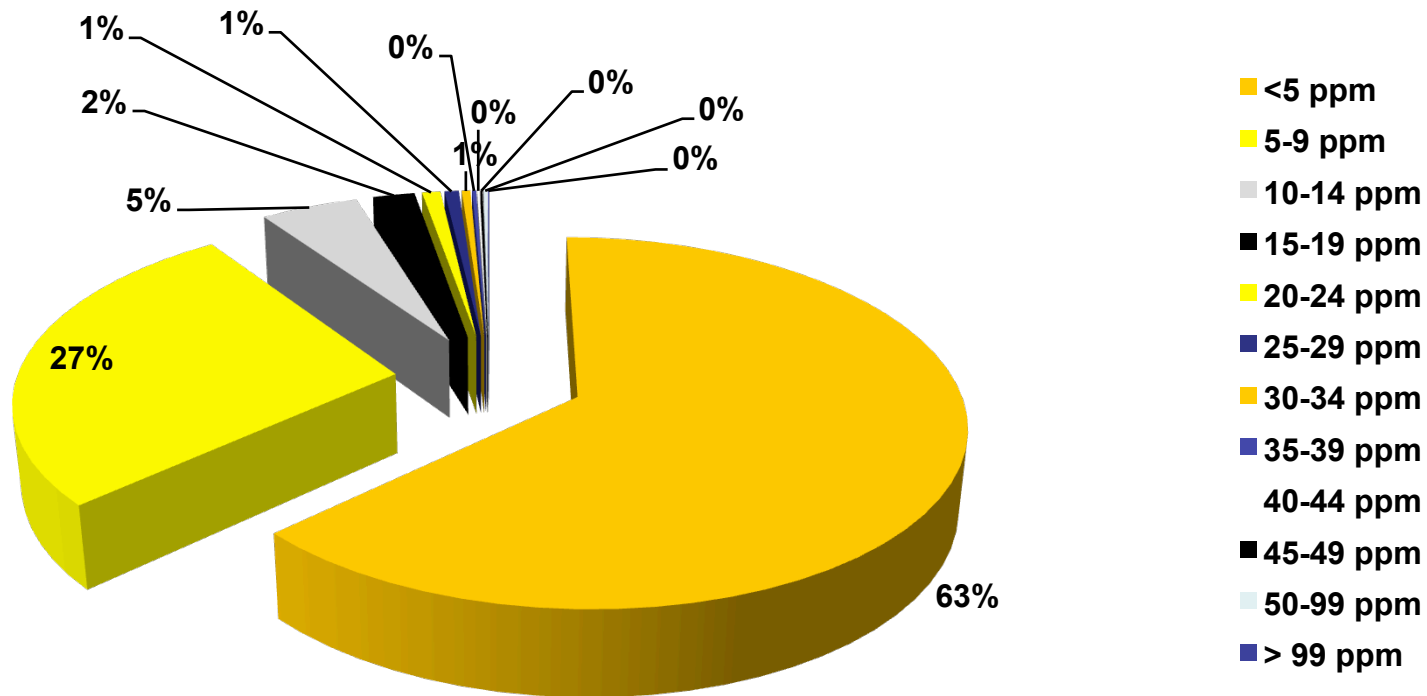


CO_{ex} in hashish smokers in the Help-COmets study



Distribution of CO_{ex} in non smokers in the Help-COmets study

Class of CO in non smokers



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