



National Institute for Public Health  
and the Environment  
*Ministry of Health, Welfare and Sport*



## Tobacco additives: PITOC and EMTOC

Reinskje Talhout  
(RIVM, the Netherlands)



[www.rivm.nl](http://www.rivm.nl)  
[www.tabakinfo.nl](http://www.tabakinfo.nl)



# Tobacco products

Attractive, addictive and toxic

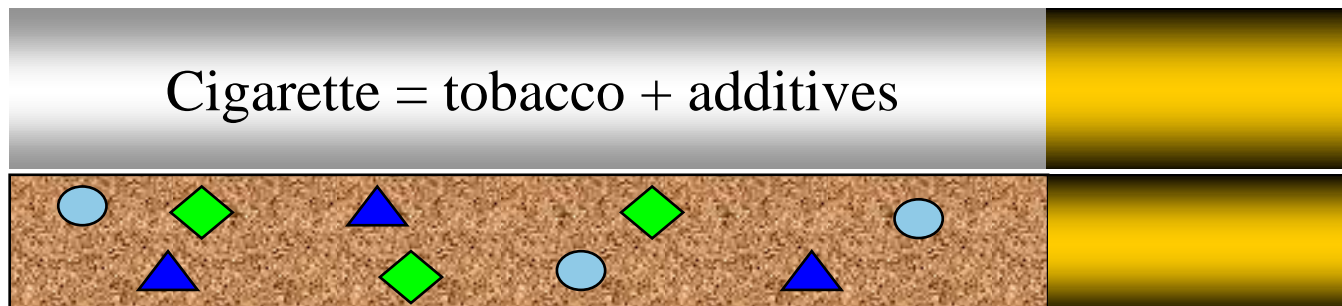
- Natural tobacco ingredients (>2500)
- Tobacco additives (~600)
- Smoke components (>6000)
- Design properties, e.g. filter ventilation





# Cigarette additives

- ~600 different additives
- E.g. glycerol, sugars, cocoa, licorice, menthol, vanilline, cellulose
- Most important functions:
  - Improve taste
  - Moisturize tobacco
  - Bind product
- Differ per brand, average 25 in tobacco, up to 10% of weight





## PITOC – Public Information Tobacco Control

- Reduction of smoking-related morbidity and mortality
- Disseminate tobacco additive information (Directive 2001/37/EC)
- Addiction prevention through information disclosure
  - increase awareness that tobacco products contain additives
  - inform on **function** and **health effects** of selected **additives**



*This initiative has received funding from the European Union in the framework of the Health Programme*



## Partners PITOC

### **RIVM, coordinator, create fact sheets**

Anne Kienhuis, Lya Hernandez, Reinskje Talhout

RIVM, The Netherlands

WHO Collaborating Centre for Tobacco Product Regulation and Control

### **DKFZ, create fact sheets**

Martina Pötschke-Langer and Urmila Nair

Cancer Research Center (DKFZ), Germany

WHO Collaborating Centre for Tobacco Control

### **Translate and disseminate**

Public institutions in 16 European countries: Austria, Belgium, Bulgaria, Denmark, Estonia, Finland, France, Germany, Malta, Netherlands, Norway, Romania, Switzerland, Turkey, Poland, UK



# PITOC – Public Information Tobacco Control

Function and effects of 14 tobacco additives

## Humectants

Glycerol, Propylene glycol, Sorbitol

## Flavours

Cocoa, Furfural, Licorice, Menthol, Prune, Sugars, Vanillin, Carob bean

## Binders

Cellulose fibre, Guar gum

## Other

Ammonium compounds, acetaldehyde (smoke component)





# PITOC – Public Information Tobacco Control

Fact sheets for (semi-)professionals and general public

- Assessment of direct and indirect toxicity
  - Toxicity (dose-dependent)
  - Addictivity
  - Attractivity
- Translation for general public
  - Comprehensible
  - Correct message







# Results

- Two reports for professionals, 15 fact sheets for general public
- FS online in 9 countries, 5 to follow soon, 2 not yet known

**Tobacco additives: information for professionals**

Publicatiedatum: 20-09-2012  
Wijzigingsdatum: 13-09-2012

**This report on seven tobacco additives, menthol, carbonyl, sorbitol, propylene glycol, glycerol, ammonium compounds, cocoa, natural and the smoke components acetaldehyde, formaldehyde and acrolein, has been created by the National Institute for Public Health and the Environment (RIVM), Bilthoven, the Netherlands.**

National Institute for Public Health and the Environment  
Ministry of Health, Welfare and Sport

**dkfz.**  
GERMAN CANCER RESEARCH CENTER  
at the Helmholtz Association

A report on seven other tobacco additives, menthol, carbonyl, sorbitol, propylene glycol, glycerol, ammonium compounds, cocoa, natural and the smoke components acetaldehyde, formaldehyde and acrolein, has been created by the German Cancer Research Center, (DKFZ), Heidelberg, Germany. The introduction is a common product. The electronic version of that report can be found on the [DKFZ website](#).

The reports have been written in the context of the EU project Public Information Tobacco Control (PITOC). The reports aim to inform professionals on the general uses, tobacco industry uses and harmful health effects of selected tobacco additives. A version for the lay public has been based on the fact sheets in these reports. The originals of the laymen fact sheets (in English) can be found on the [RIVM website](#) and the [DKFZ website](#).

**dkfz.** DEUTSCHES KREBSFORSCHUNGSZENTRUM  
IN DER HELMHOLTZ-GEMEINSCHAFT

Suchwort

Aktuelles | Forschung | Jobs & Karriere | Über uns | NCT Heidelberg | DKFZ

Über uns

**Additives in Tobacco Products / EU-Project PITOC**

**Information on Health Hazards of Tobacco Additives**

Tobacco manufacturers add numerous additives to their products. Tobacco additives make a harmful product more attractive and palatable. The EU-Project Public Information Tobacco Control (PITOC) informs policy makers, journalists, and four Governmental Organizations in a comprehensive report as well as the general public in a series of fact sheets on the mode of action of selected additives and explains their impact on health.

Seven of these fact sheets have been created by the German Cancer Research Center (DKFZ), Heidelberg, and seven by the National Institute for Public Health and the Environment (RIVM), Bilthoven, the Netherlands. The production is a common product.

The World Health Organization Framework Convention Tobacco Control (FCTC) is in response to the world-wide tobacco epidemic and aims to contribute to the reduction of smoking-related morbidity and mortality. Article 8 and 10 of the FCTC are concerned with the regulation of tobacco product composition, including dissemination of information on tobacco products to the general public. The partial guidelines of FCTC article 8 states that regulating ingredients aimed at reducing tobacco product attractiveness can contribute to reducing the prevalence of tobacco use and dependence among new and continuing users.

The EU Tobacco Products Directive 2011/87/EC prescribes that data on tobacco additives, submitted by manufacturers, needs to be disseminated to the consumers.

**Additives in Tobacco Products**

**Contribution of carbonyl, cellulose fibre, gear gum, liquorice, menthol, prune juice concentrate and vanillin to attractiveness, addictiveness and toxicity of tobacco smoking**

Report Additives in Tobacco Products



Turkey website <http://www.tapdk.gov.tr/>

The screenshot displays the website of the Tobacco and Alcohol Control Administration (TAPDK) in Turkey. The main header features the TAPDK logo and the text "DÜZENLEME KURUMU". Below the header, there is a navigation menu with links for "Anasayfa", "Kurum Hakkında", "Kurul Üyeleri", "Mevzuat", "Tütün ve Alkol Kontrolü", "Piyasa Düzenlemeleri", "Yayımlar", "Duyurular", "Etkinlik", and "English".

The main content area is titled "TÜTÜN KONTROLÜ KAMUUYU BİLGİLENDİRMESİ". It includes a sub-section for "PITOÇ - Public Information Tobacco Control (Tütün Kontrolü Kamuyu Bilgilendirme)", which features the Turkish and European Union flags. The text in this section discusses the tobacco industry, the health risks of smoking, and the goals of the PITOÇ project, which include providing a taste to cigarettes, controlling tar, and reducing nicotine. A sidebar on the right contains several interactive buttons: "TÜTÜN KONTROLÜ KAMUUYU BİLGİLENDİRMESİ", "MULTİMEDYA", "BİLGİ EDİNME", "SATIŞ BELGESİ SİSTEMİ", "SATICI SORGULAMA", "SEKTÖREL BİLGİ KİTAPÇIKLARI", "RESMİ İSTATİSTİKLER", "AVRUPA BİRLİĞİ BİLDİRİM SİSTEMİ", "TÜTÜN MAMULLERİ LİSTESİ", "BAĞLANTILAR", and "RESMİ GAZETE".

At the bottom of the page, there is a footer with navigation links for "Anasayfa", "Kurum Hakkında", "Kurul Üyeleri", "Mevzuat", "Tütün ve Alkol Kontrolü", "Piyasa Düzenlemeleri", "Otopazar", "Raporlar/Suçlar", "Faaliyet Raporları", "Etiketler/Bilgi", and "Duyurular". The TAPDK logo is also present in the footer.



Turkey website <http://www.tapdk.gov.tr/>

The screenshot shows the official website of the Tobacco and Alcohol Market Regulation Authority (TAPDK) in Turkey. The header features the TAPDK logo, the organization's name in Turkish, and a portrait of a man. A navigation menu includes links for 'Anasayfa', 'Kurum Hakkında', 'Kurul Üyeleri', 'Hizmetler', 'Tütün ve Alkol Kontrolü', 'Piyasa Düzenlemeleri', 'Yararlar', 'Duyuru', 'Etkinlik', and 'English'.

The main content area is titled 'TUTUN KONTROLÜ KAMUYU BİLGİLENDİRME' and contains a section for 'Anasayfa'. Below this, there is a banner for 'PITOC - Public Information Tobacco Control (Tütün Kontrolü Kamuyu Bilgilendirme)' with logos for Turkey and the European Union. The main article is about 'Kakao' (Cocoa), which is described as a tropical fruit. The text explains that cocoa is a source of various nutrients and is used in many products, including chocolate and cosmetics. It also mentions that cocoa is used in the food and beverage industries.

On the right side of the page, there is a vertical menu with several buttons: 'TUTUN KONTROLÜ KAMUYU BİLGİLENDİRME', 'MULTİMEDYA', 'BİLGİ EDİNME', 'SATIŞ BELGESİ SİSTEMİ', 'SATICI SORGULAMA', 'SEKTÖREL BİLGİ KİTAPÇIKLARI', 'RESMİ İSTATİSTİKLER', 'AVRUPA BİRLİĞİ BİLDİRİM SİSTEMİ', 'TUTUN MAMULLERİ LİSTESİ', 'BAĞLANTILAR', and 'RESMİ GAZETE'.

At the bottom of the page, there is a footer with links for 'Anasayfa', 'Kurum Hakkında', 'Tütün ve Alkol Kontrolü Piyasa Düzenlemeleri', 'Hizmetler/Veriler Faaliyet Raporu', and 'Etkinlikler Duyurular'. The TAPDK logo is also present in the footer.



## Additives in Dutch Tobacco Products

- Submissions of tobacco additive lists by manufacturers by electronic database EMTOC (Electronic Model Tobacco Control)
- Analysis of 2010 data (70% of submissions, 80% of cigarette brands)





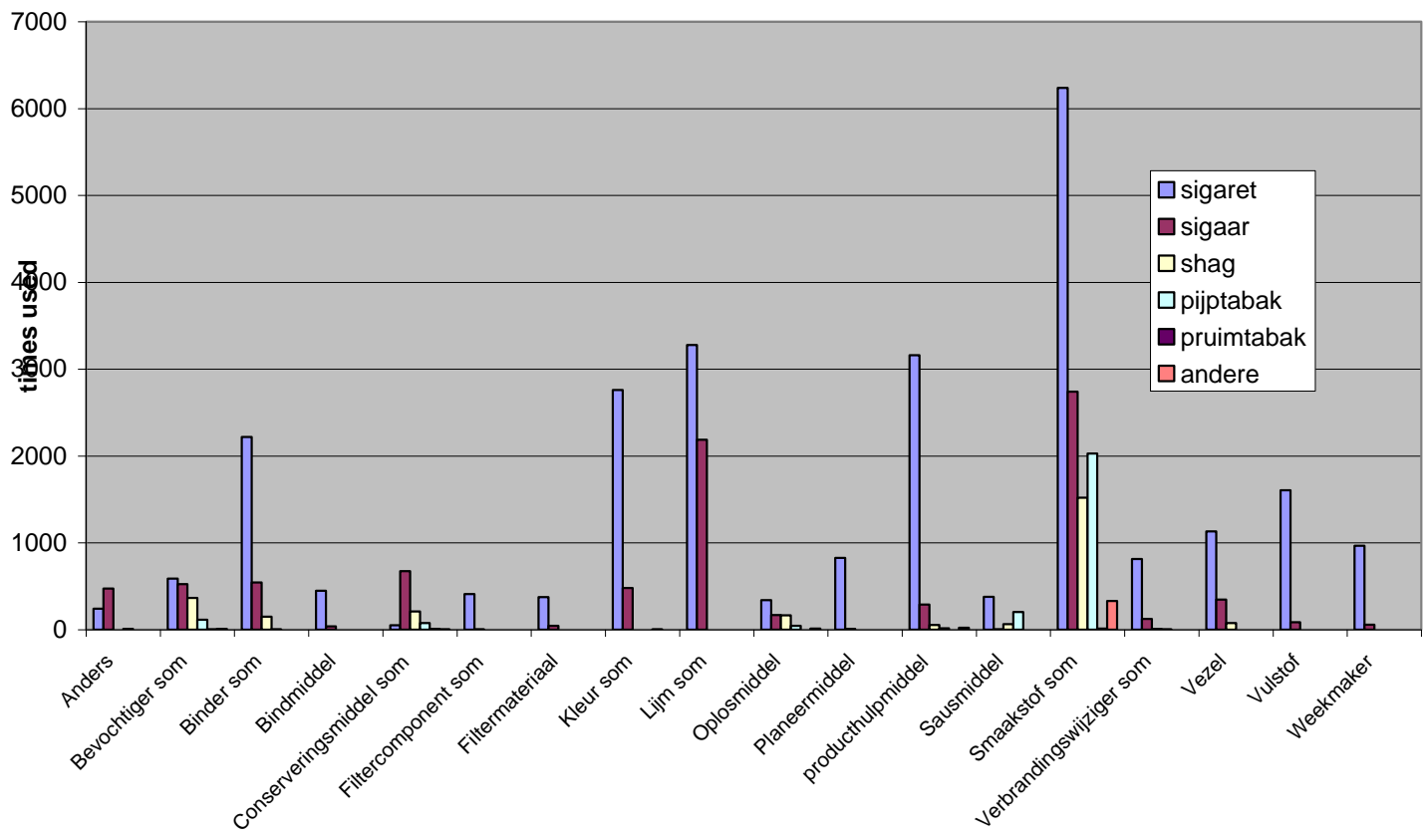
## No. Additives in cigarettes

	<b>No. additives</b>
All brands together	590
less than 10x	294
less than 25x	356
less than 50x	449
less than 75x	504
less than 100x	530
more than 100x	60
over 0.1% weight	83

=> Many additives brand specific? To give own taste?



# Function of additives





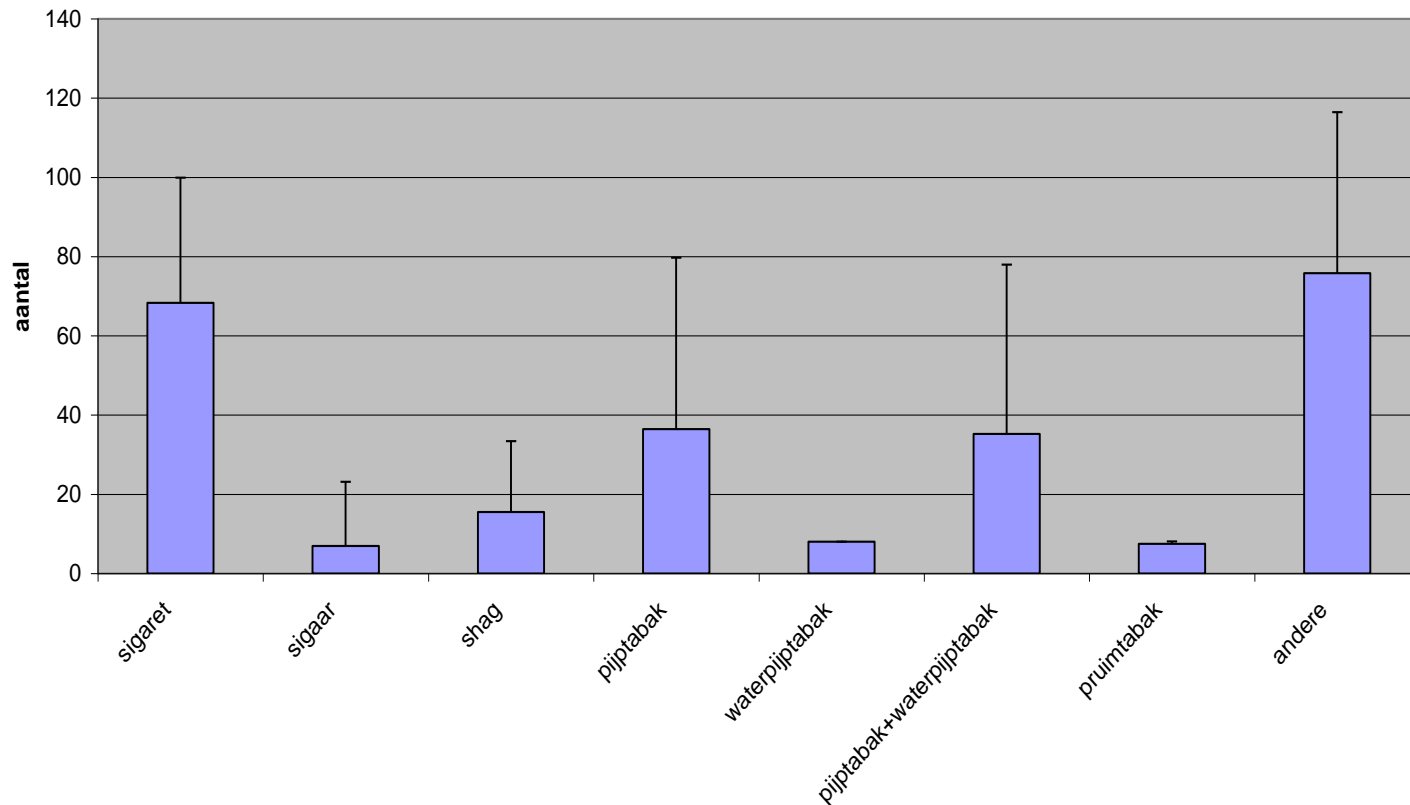
## % flavours per product type

<b>product</b>	<b>of all additives</b>
Cigarette	61% (of 590 different additives)
Cigar	62% (482)
RYO	85% (180)
Pipe tobacco, including waterpipe	97% (362)



# Average no. additives per product type

Cigarette 68 additives (including NTMs)

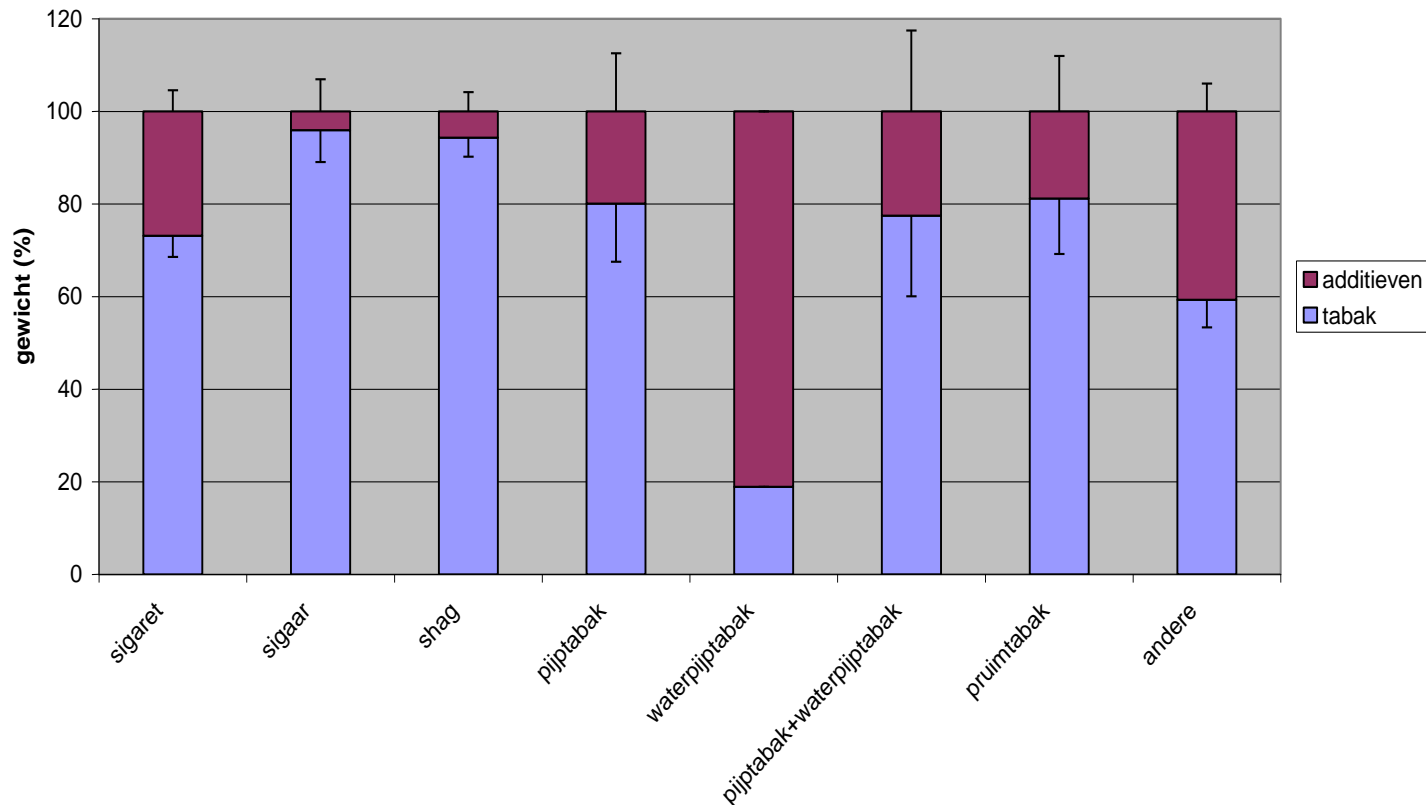






## Average % w/w additives per product type

Cigarette 27% additives (including NTMs)





## Additives in cigarette tobacco

- Average 25, min 0, max 141
- Some brands few additives
  - Often “English” cigarettes, Virginia tobacco
  - ‘fluecured’, many sugars
- Many additives
  - “American blend” Virginia, Burley and Oriental
- Most often added to tobacco:
  - Flavours:
    - > benzaldehyde (147x), almond taste
    - > piperonal (149x), cherry, vanilla taste
    - > vanillin (245x), vanilla taste
  - Humectants:
    - > glycerol (164x)
    - > propylene glycol (248x)



## Top 40s of both frequency and weight %

### Tobacco

- Guar gum (binder)
- Water (humectant)
- Propylene glycol (humectant)
- Glycerol (humectant)
- Cocoa (flavour/casing)
- Different sugars (flavour/casing)

### NTMs

- Calcium carbonate (filler)
- Citrate and salts (burning modifier, also in tobacco)
- Many types of cellulose (fibre, binder)
- Titanium dioxide (colour)
- Ethylene, vinylacetate co-polymer (glue)
- triacetine (plasticizer)
- polyvinylacetate (glue)





## 52% of smoking youths wants additive information

- Which ingredients, also per brand and type
- Effects on health, addiction and flavour
- Why added by tobacco manufacturers





## Careful: health effects particular brands

- e.g. 'light' versus 'regular'
- e.g. additive free cigarettes



- "These cigarettes promote the fact that they do not have all the harmful and artificial chemicals that are so often put into other cigarettes."
- "I would certainly choose these from the shop, purely for the reason that it is clearly promoted that they are cleaner than if you smoked the 'not so natural' cigarettes."

<http://lukeblezard.blogspot.com/2007/08/camel-natural-cigarettes.html>



## Dissemination of additive lists per brand and type

- Germany
  - Belgium
  - Czech republic
  - Netherlands (dec 2012)
- 
- Easy via EMTOC
  - Link to PITOC fact sheets
  - But... How will public understand this info? What will be effect on their perceptions?



# Summary

- PITOC:
  - Info for professionals (English)
  - Info for public (national languages)
- EMTOC:
  - Easy data-analysis
  - Easy dissemination to public



