09:45-10:30 Presentation and discussion:

Why clean up fossil fuels?

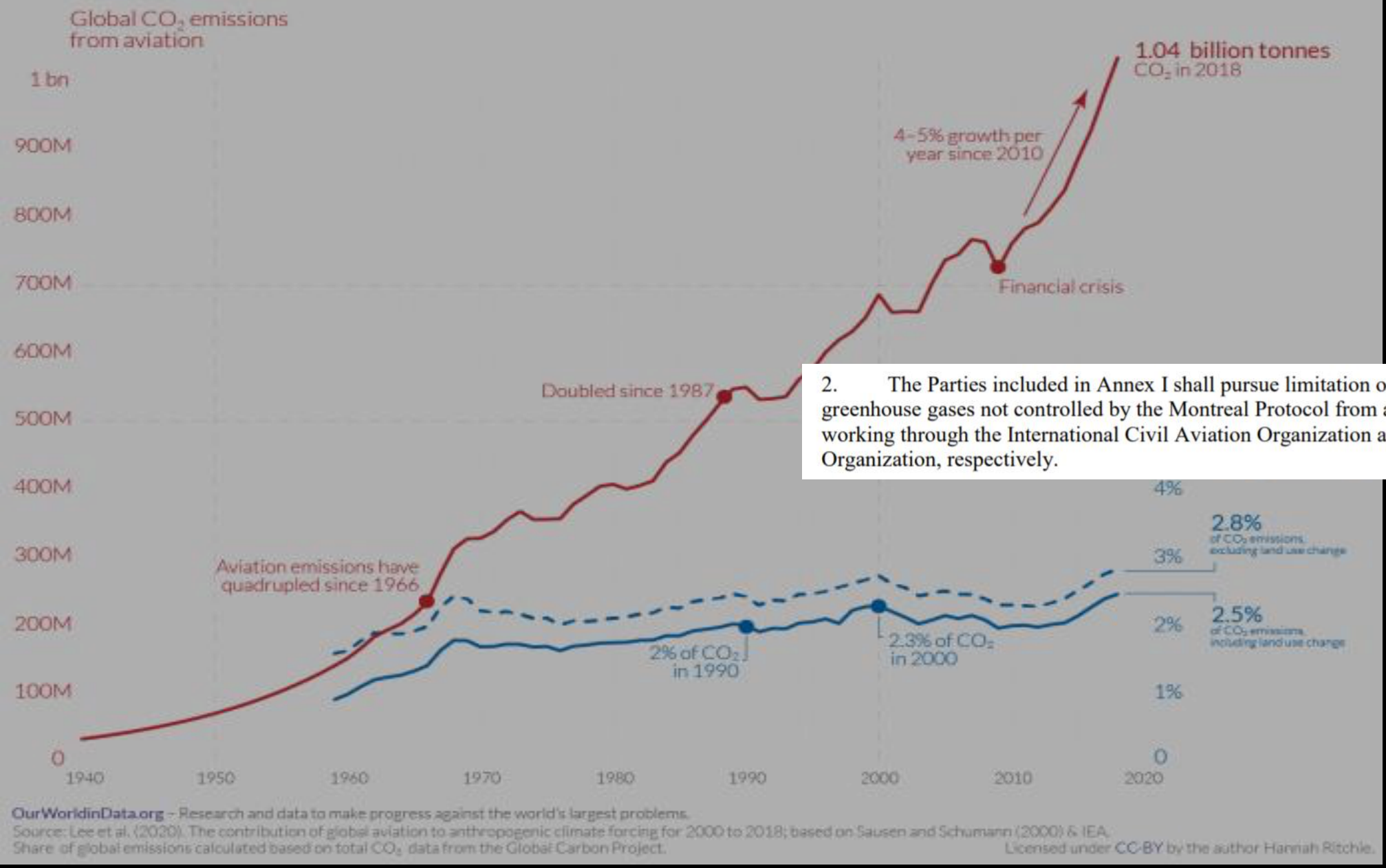
COPENHAGEN CONTRAILS CONFERENCE
25-26 March 2025 • Scandic Copenhagen

Alexander Bjørn Hansen
Policy Officer,
Green Transition Denmark

Global carbon dioxide emissions from aviation

Aviation emissions includes passenger air travel, freight and military operations. It does not include non-CO_2 climate forcings, or a multiplier for warming effects at altitude.

Our World in Data



2. The Parties included in Annex I shall pursue limitation or reduction of emissions of greenhouse gases not controlled by the Montreal Protocol from aviation and marine bunker fuels, working through the International Civil Aviation Organization and the International Maritime Organization, respectively.

OurWorldinData.org – Research and data to make progress against the world's largest problems.
Source: Lee et al. (2020). The contribution of global aviation to anthropogenic climate forcing for 2000 to 2018; based on Sausen and Schumann (2000) & IEA.
Share of global emissions calculated based on total CO_2 data from the Global Carbon Project.

Rådet for Grøn Omstilling

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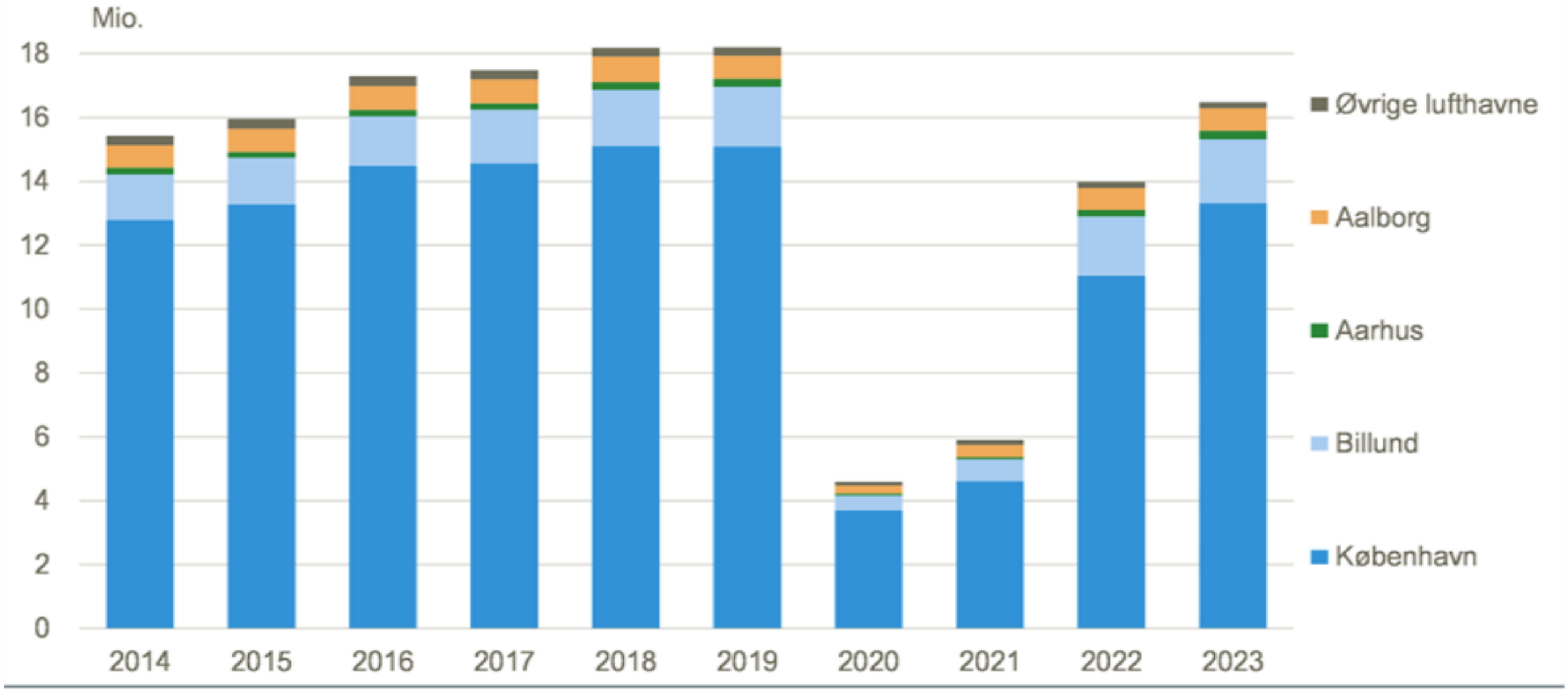
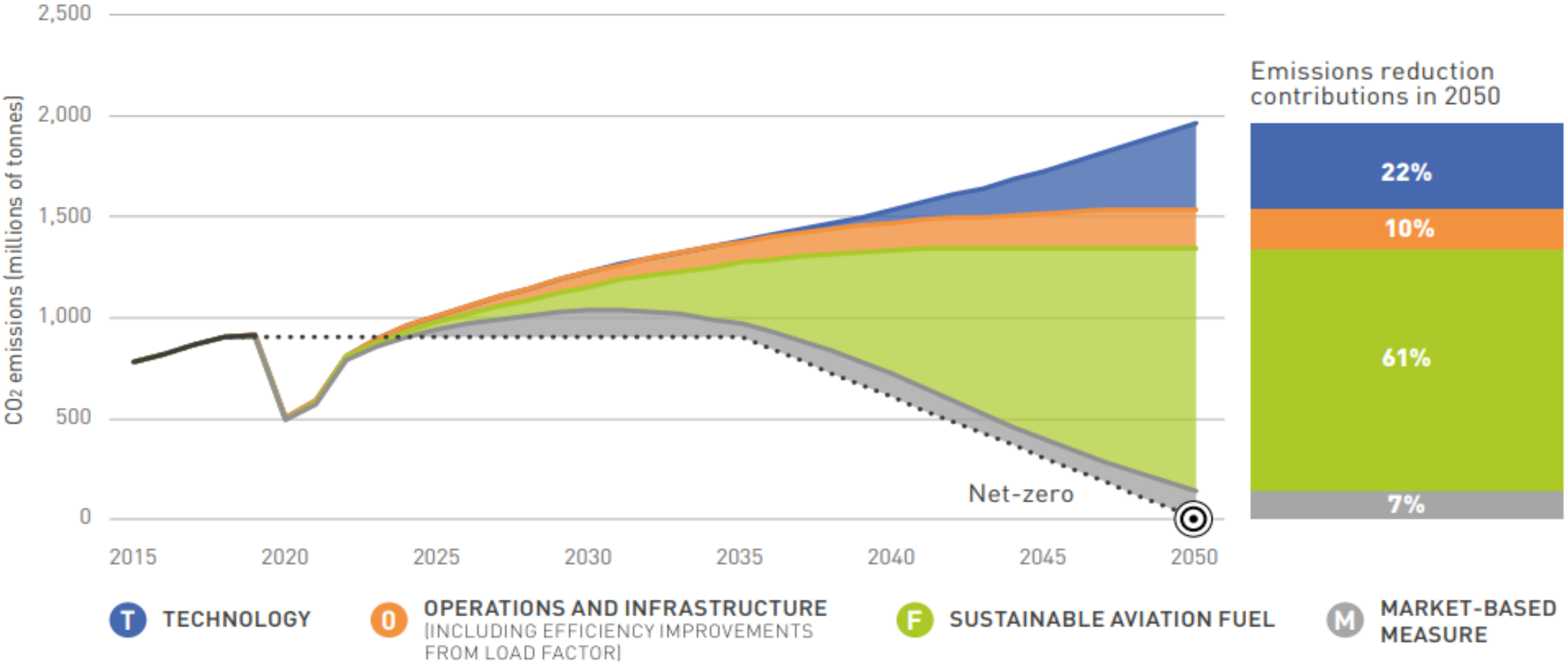
Afrejsende passagerer, faktiske tal



Kilde: www.statistikbanken.dk/flyv92

Rådet for Grøn Omstilling



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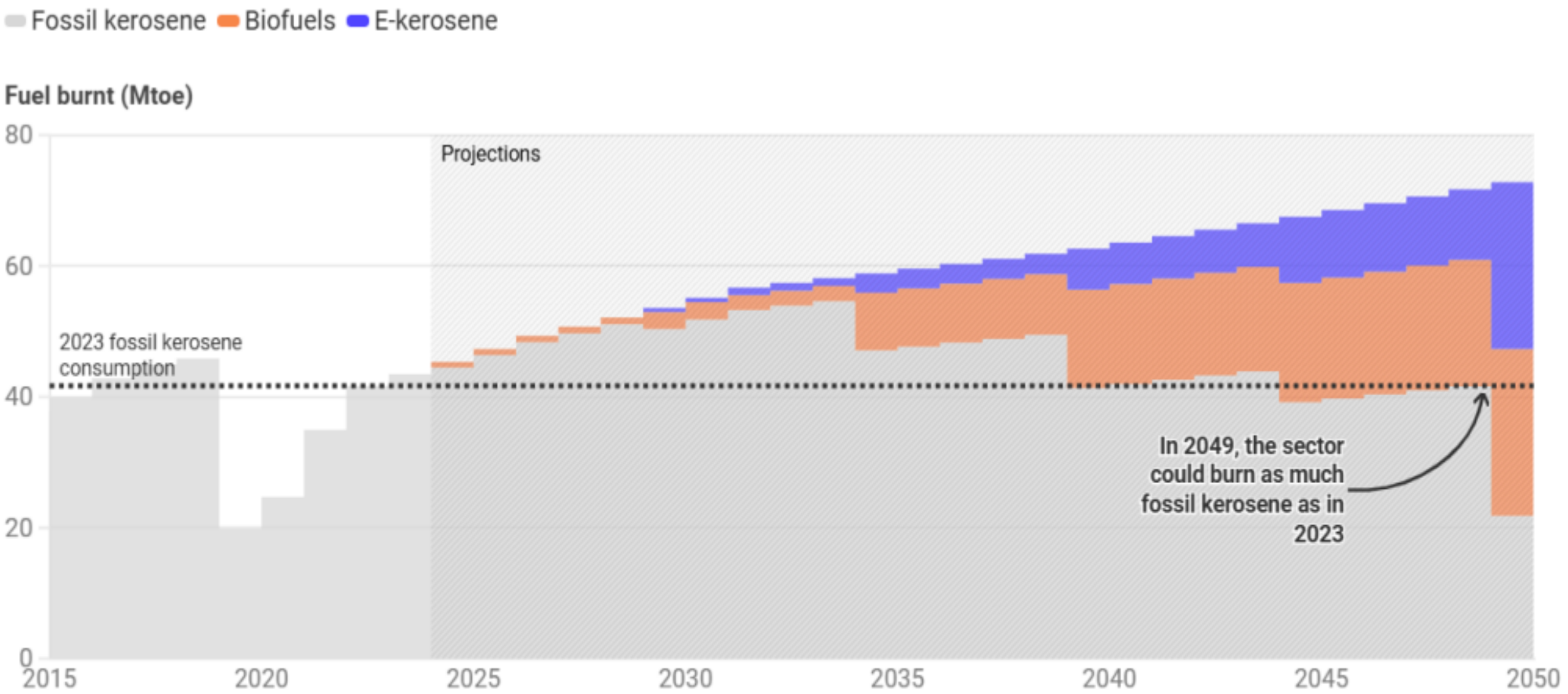


Source: T&E modelling based on Airbus and Boeing market outlooks

T&E

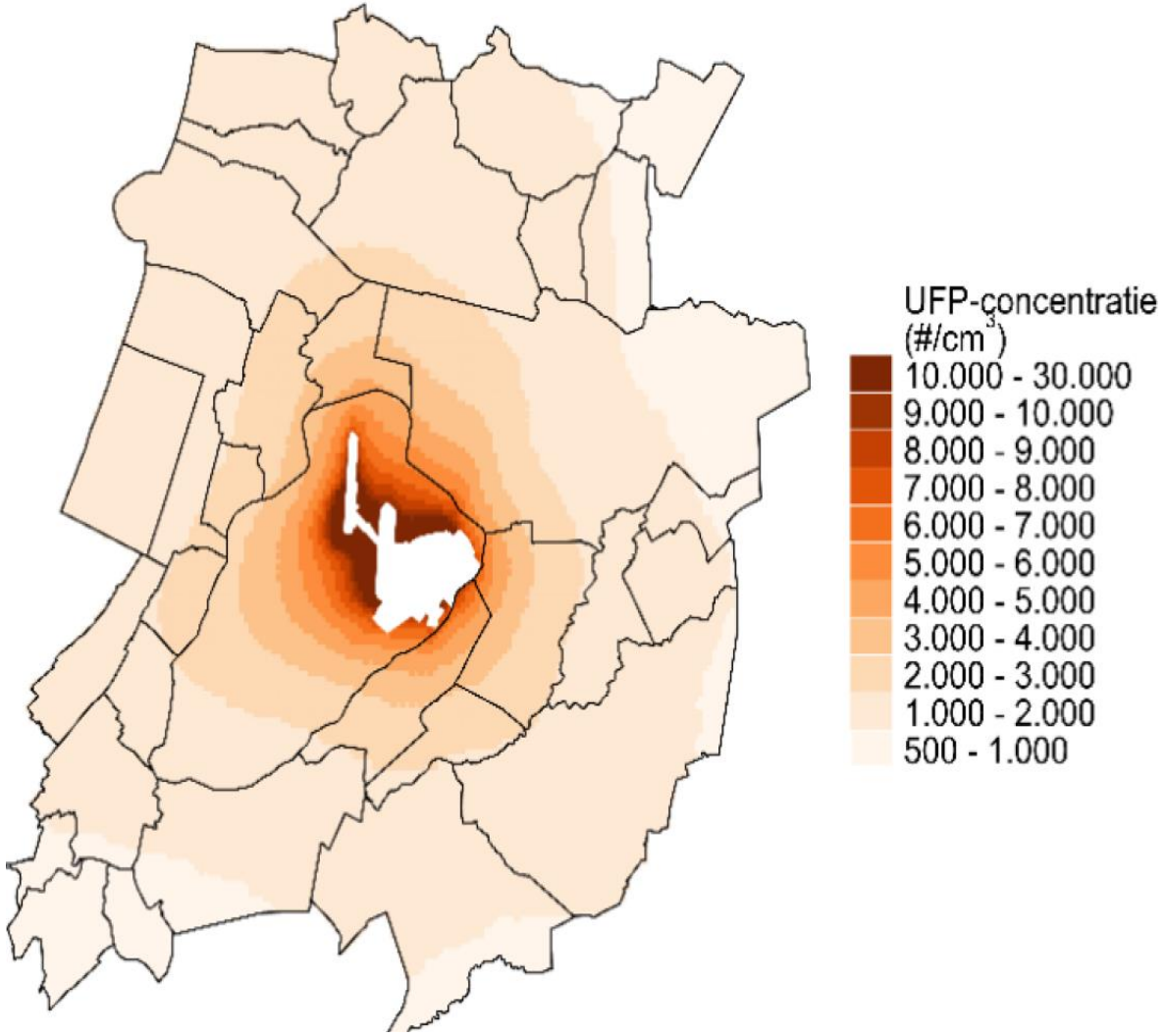
- **Aircraft emit many different pollutants which affect human health**
- Known climate impact of CO2 emissions vs. less known climate and health effects of non-CO2 emissions
- Link between aviation particules emissions and certain health issues
- Particularly **vulnerable groups: children, elderly, airport personnel**
- Emitted pollutants **depend strongly on the composition of aviation fuel**

  Address the issue through changing jet fuel quality (aromatics and sulphur content)

Pollutants	**Health implications (depend on exposure)**
Particulate matter, hydrocarbons, NOx, Volatile organic compounds, black carbon, sulphur compounds	High blood pressure, dementia,diabetes, cardiovascular and respiratory problems

- **Health effects of long term exposure to UFPs around 32 major European airports**
- EU27, Norway, Switzerland and the UK

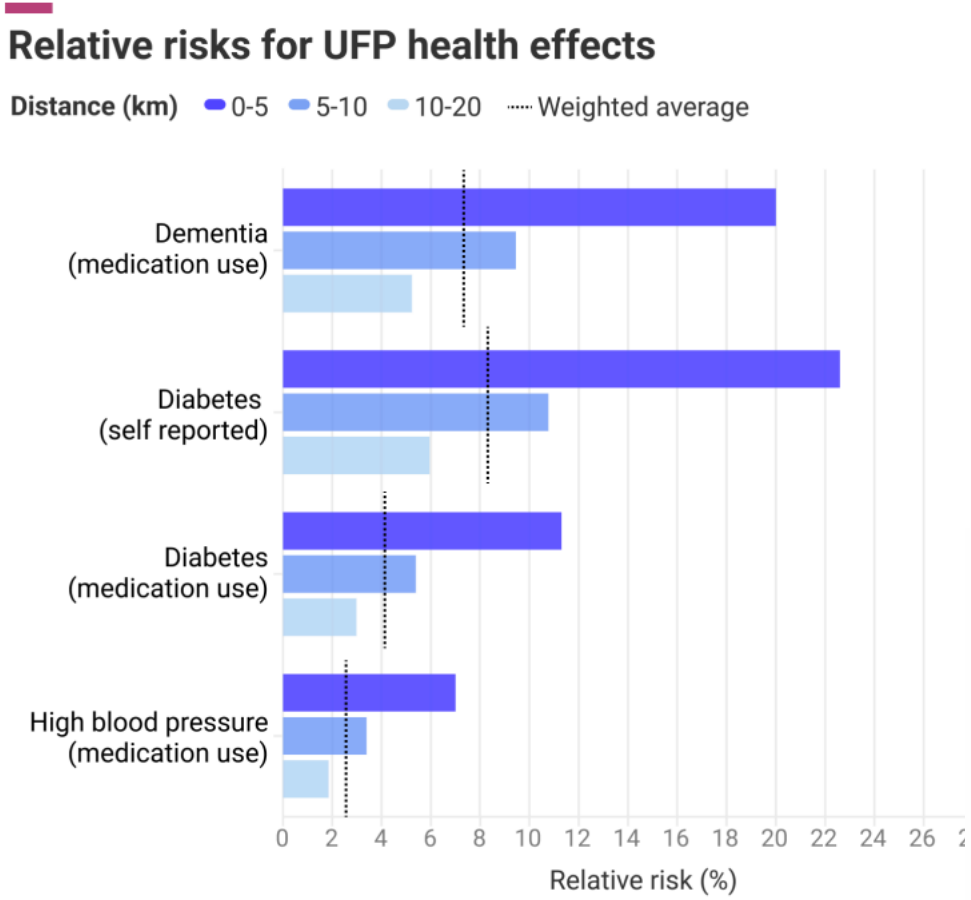
- **Population near airports**
- Total of 51,5 million people living within 20km of airports in Europe
- 4.1 million people within 5 km
- 12.6 million people within 5-10 km
- 36.5 million people within 10-20 km
- Other population affected e.g. workers not considered (approx. 1 million)



Luftforurening udgør nu næststørste risiko for død – overgår smøger og dårlig vandhygiejne

PLUS | 20. juni 2024 kl. 10:50 | 12

Rådet for Grøn Omstilling



Source: CE Delft

Children near Amsterdam airport use inhalers more, study finds

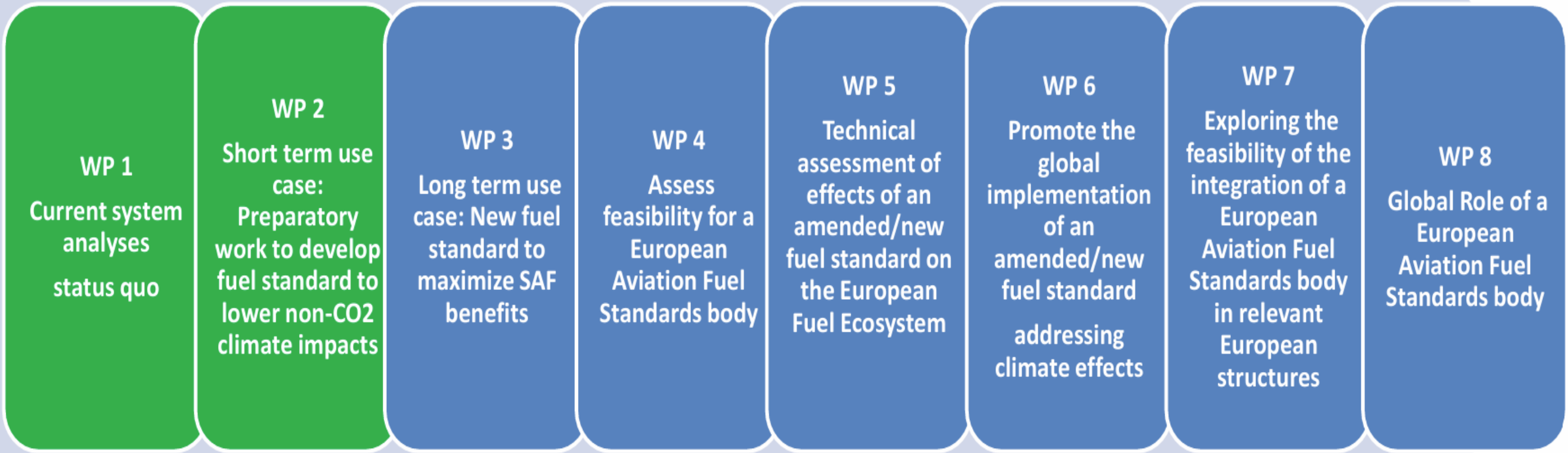
Results show increase in symptoms such as wheeziness in presence of high aviation-related ultrafine particles

Store mængder ultrafine partikler fra Københavns Lufthavn

Mobil partikeltæller viser ifølge ny rapport et "væsentligt bidrag" af sundhedsskadelige ultrafine partikler, der kommer fra lufthavnen.

The Commission has commenced a project on low-aromatic fossil fuels

Rådet for Grøn Omstilling



EASA is providing technical assistance to the European Commission to assess the feasibility and requirements for optimizing aviation fuel composition to reduce climate impact while ensuring the highest safety standards.

Summary of the Action

EASA

4 refineries in the Nordics that already have the technology to produce low-aromatic fossil fuel:

Rådet for Grøn Omstilling

- Kalundborg (Denmark)
- ST1 (Sweden)
- Preem (Sweden)
- Nesté (Finland)

Rådet for Grøn Omstilling

Danish passenger tax

Year	Intra-EU	Medium distance	Long distance
2025	4 €	33,5 €	40,2 €
2026	4 €	34,8 €	42,9 €
2027	4 €	36,1 €	45,5 €
2028	5,3 €	37,5 €	46,9 €
2029	5,3 €	40,2 €	52,2 €
2030	6,7 €	41,5 €	54,9 €

Lav-aromatisk brændstof

Rådet for Grøn Omstilling

LOW AROMATIC RECOMMENDATIONS

The Climate Partnership for Aviation encourages the Government to:

1. Initiate a **study that investigates how to create a feasible supply chain of low aromatic jet fuel**. App. 5 million DKK is allocated to the study.

2. Based on the findings from the study, app. **135 million DKK is reserved to be allocated to reducing the aromatic content in jet fuel from Danish airports over the period from 2027-2033** – or as soon as it is technically feasible according to the study,

3. And at the same time that Denmark **takes the lead in the EU** to pave the way for legislation that secures that the aromatic content of fossil jet fuel distributed to EU and EØS airports will be gradually lowered to reach a level of i.e. 8 percent in 2033.

Challenges for aviation

- Few facilities can currently produce
- No economical carrot for aviaiton or political push (yet)
- Needs to go big to have real impact due to logistics

Advantages for aviation

- A cheap and impactfull option to mitigate non-CO2 effects
- Significant improved local air quality for airports and local communities
- Investing into low-aromatic fuels will make it cheaper to reach 0% when certification allows it
- Does not conflict with other sustainable aviation initiatives


Questions or
comments

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