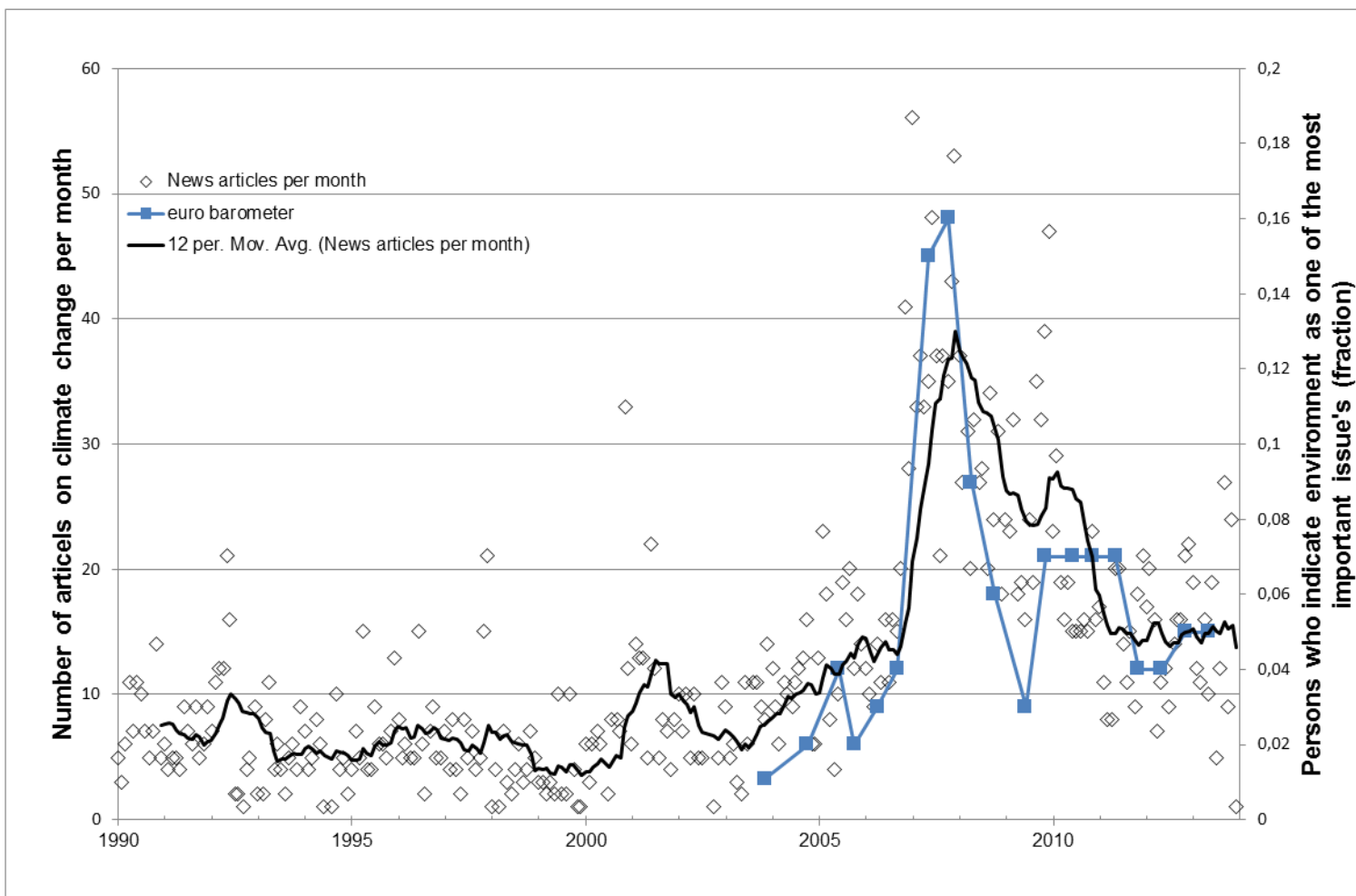




Reducing the carbon footprint of the steel industry

19 - 20 April 2017

jan.hopman@tno.nl



Source: Utrecht University



Holding the increase in the global average temperature to well below **2 °C above pre-industrial levels...**

... and pursuing efforts to limit the temperature increase to **1.5 °C above pre-industrial levels**

... to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century ...

- Paris Agreement, UN 2015

CO₂ Budgeting

Budget for 2 °C target:	2900 Gt CO ₂
CO ₂ emissions up until 2016:	- 2138 Gt CO ₂
<hr/>	
Remaining emissions:	= 762 Gt CO ₂
CO ₂ emissions in 2016:	/ 40 Gt CO ₂
<hr/>	
Years left (@2016 emissions):	= ~19 years

By 2036, the 2°C target will be surpassed
(By 2021, the 1.5°C target will be surpassed)

Source: Carbon Brief 2017

Why CCS?

Heavy Industry (e.g. Cement, Fertilizer, Steel):

- No alternative for CCS

Energy sector:

1. Energy saving
2. Renewable Energy
3. During the energy transition, fossile fuels will be used at large scale (renewable energy deployment is not fast enough)
 - CCS can enable CO2 emission reduction:
 - Fast
 - Large scale
 - Affordable
 - CCS already proven at large scale



not yet



Reducing the carbon footprint of the steel industry

19 - 20 April 2017



- 13.15 John Gale (IEAGHG, UK)
Potential for CCS in the Iron and Steel Sector
- 13.35 Carmine Marzano (European Commission)
An update on Commission activities in regard to the carbon footprint reduction in the industry
- 13.55 Gerdi Breembroek (RVO, NL)
CCUS in the Netherlands – recent developments
- 14.15 Coffee break
- 14.45 Paul Cobden (ECN, NL)
The ECN approach towards decarbonisation of the steel industry
- 15.05 Jan van der Stel (Tata Steel, NL)
Update to the developments of Hisarna
- 15.25 End of session



BUS 1: SURNAME A - R

BUS 2: SURNAME S - Z

- 15:35 Departure by coach to Velsen-Noord
- 16.15 Coach tour over the site of Tata Steel in Velsen-Noord, including a visit to and local information on the modified Hlsarna demonstration plant
- 17.15 Departure by coach to Zaandam
- 17.45 Visit to Zaanse Schans including a guided tour
- 19.30 Dinner at Restaurant d'Hoop op de Swarte Walvis
- 21.30 Departure by coach to Intel hotel

Program Thursday 20 April 2017

- 8.00 Departure by coach from the Intel Hotel to ECN in Petten

