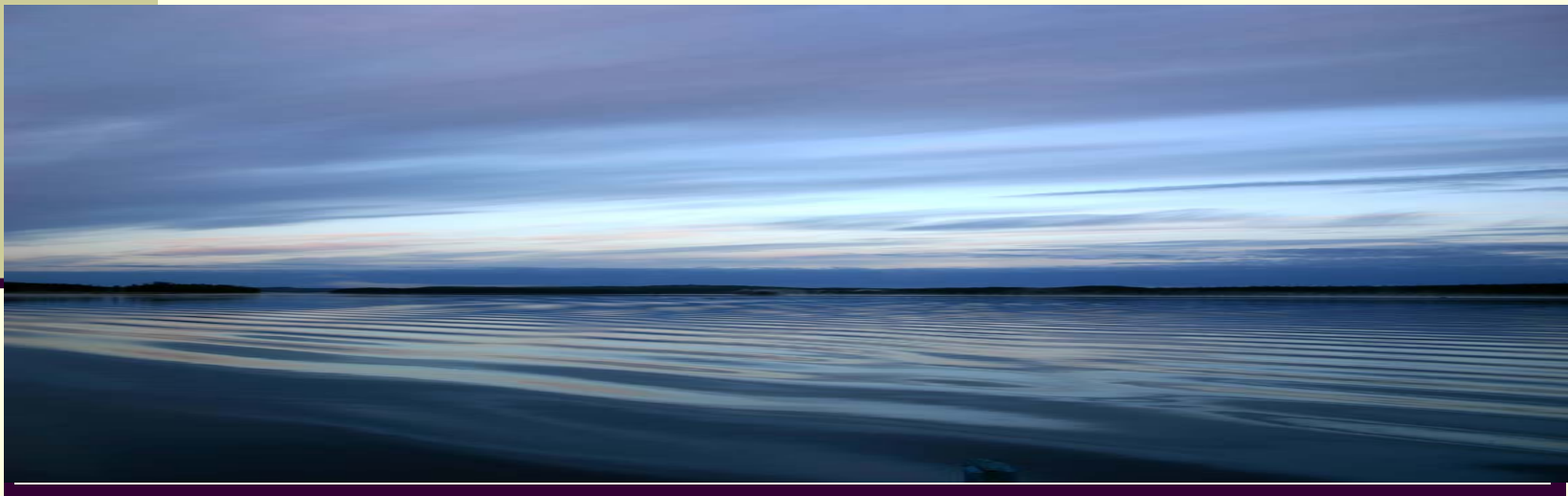


---

# Recent amendments to the OSPAR Convention to permit carbon capture and storage



David Johnson, Executive Secretary  
OSPAR Commission / Bonn Agreement [29 October 2007](#)

# Introduction

---

- ➔ the reality of human-induced climate change is beyond question [IPCC Fourth Assessment, 2007]
- ➔ simple physics - heat trapping gases into the atmosphere = heating planet [Swedish Nobel Prize-winner, Svante Arrhenius, calculations]
- ➔ Evidence of destabilisation, significant shift within last 3 – 5 years, predicted = observed
- ➔ Need for preventative action = inescapable





1859

2001

2002

© GARY BRAASCH

© GARY BRAASCH

2004

© GARY BRAASCH

1999

# Unprecedented

---

## Evidence of profound change:

- ⇒ 2002 – collapse of Larson B ice shelf, not happened in 10,000 years
- ⇒ Frequency of intense hurricanes nearly doubled in last 35 years
- ⇒ 2003 – heatwave in Western Europe, 14,800 elderly died in France, temperatures way above historical record
- ⇒ Sea ice extent decreased by 8% per year since 1978
- ⇒ Melt area of Greenland Ice Sheet increased by 1% /year since 1979
- ⇒ Outlet glacier velocities increasing in the south of Greenland
- ⇒ Relative sea-level rise, past 1500 years = 10cm/century, now doubled



# Impacts

---

**Potential associated impacts of higher temperatures, more energy, more violent weather:**

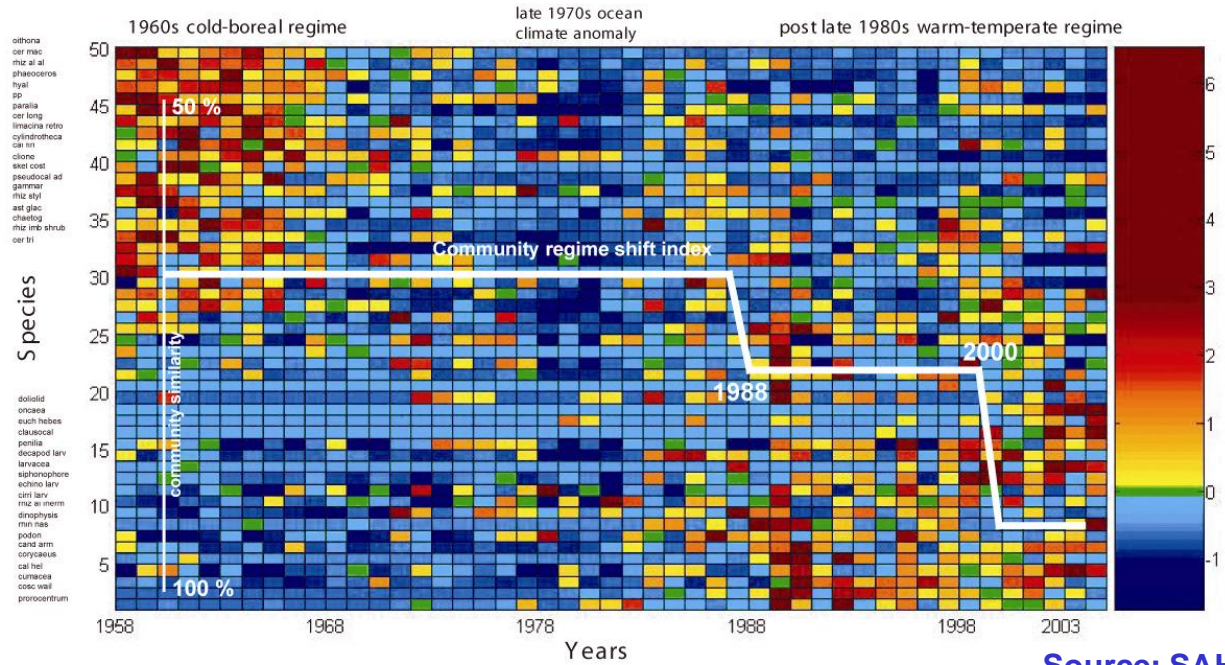
- ➔ severe storms; floods; dust storms; landslides
- ➔ sea surges; coastal erosion; saltwater intrusion of groundwater; inundation of low lying land
- ➔ failing crops; dying forests; spread of endemic diseases; millions of environmental refugees



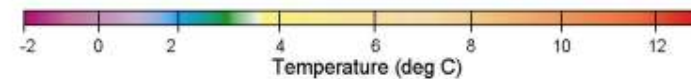
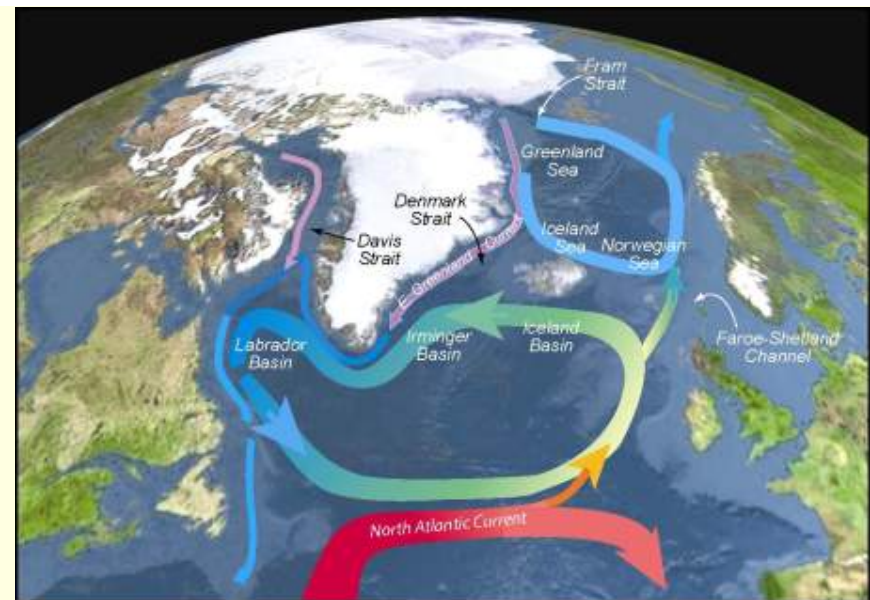
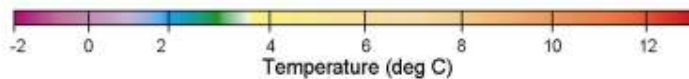
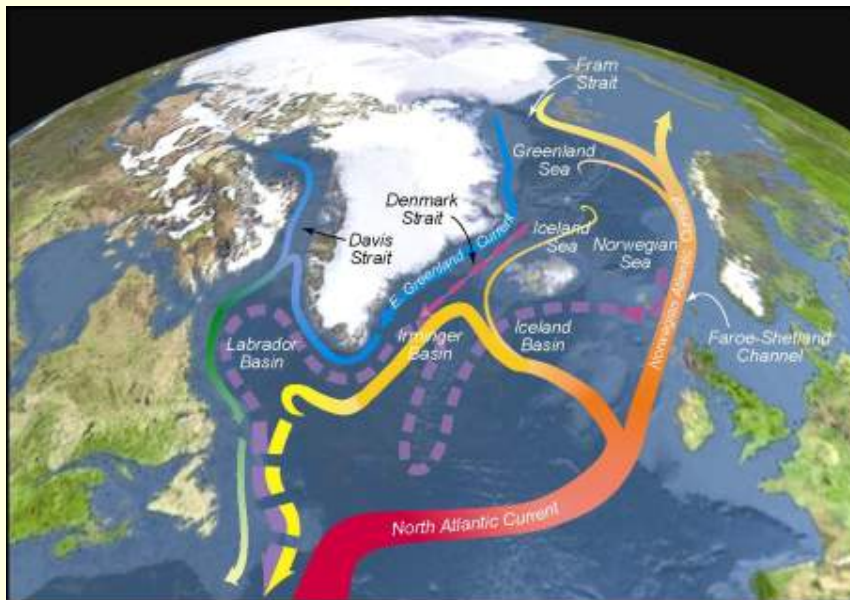
# OSPAR

Maritime Area

Higher temperatures  
 Ocean acidification  
 Plankton regime shift  
 Ocean circulation?



Source: SAHFOS



# The Problem

---

**We know we are messing up all the mechanisms of climate control, with too much carbon dioxide, methane, nitrous oxide, forest destruction and desertification.**

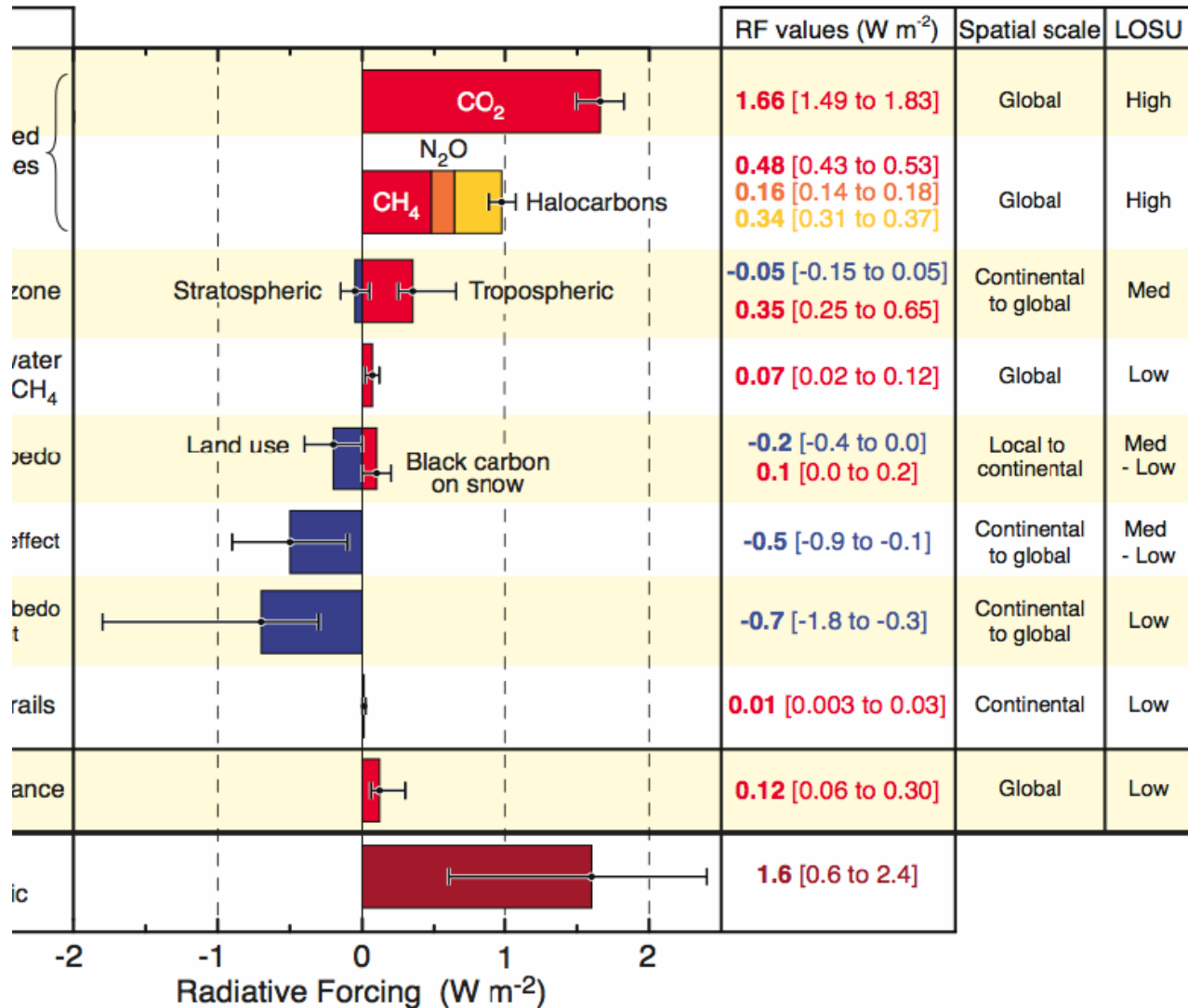
**Known since Victorian times:**

- **1827 French mathematician Joseph Fourier discovered that atmosphere absorbs heat**
- **1869 British physicist John Tyndall noted greenhouse effect**

**How long can we abuse the system?**

# Relative importance of CO<sub>2</sub>

## Radiative Forcing Components



©IPCC 2007: WG1-AR4

预览已结束，完整报告链接和二维码如下：

[https://www.yunbaogao.cn/report/index/report?reportId=5\\_15139](https://www.yunbaogao.cn/report/index/report?reportId=5_15139)



云报告  
yunbaogao.cn