



abatement opportunities & emissions trading in the EC

Aviation Side-Event COP/MOP

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it's time to act!

- potential huge costs of climate change of **major concern** to all of us!
- increasing **pressure** on transport-sector (public & political awareness!)
- efficient fuel-management reduces operating **costs**
- environmental fitness used as **marketing**-tool
- **EU**-reglementation pending – but: which is the way forward?
 - further **competition fostered** by EC-Commission („Lisbon Agenda“)
 - on the other hand: EC **concerned** about further **growth** of aviation
- each european measure has **international** implications
- aviation's **commitment** to engage in discussions about design of an ETS **conditional:**
 - **NO** further taxes &/charges and
 - **NO** distortion of competition within and beyond EU by environmental measures!

NOTE: aviation's emissions relatively **small** compared to other transport-modes!
(1 intercont. flight ~ Ø 1 car/year)

emissions world-wide

Emissions From Fuels Mio tonnes CO2	1990	1995	1999	2000	00/90 Increase	00/90 % p.a.	% of World	Tons per Person
World	20 720.7	21 809.4	22 844.7	23 422.3	+13.0%	+ 1.2%	100	3.9
EU 15	3 114.8	3 083.1	3 130.3	3 161.7	+1.5%	+ 0.1%	13.5	8.4
USA	4 825.7	5 108.7	5 488.0	5 665.4	+17.4%	+ 1.6%	24.2	20.6
Japan	1 018.7	1 099.9	1 127.7	1 154.8	+13.4%	+1.3%	4.9	9.1
Russia*	n.a.	1 588.9	1 473.4	1 505.7	- 5.2%	- 1.1%	6.4	10.3
China	2 289.5	3 009.6	3 017.2	3 035.5	+32.6%	+ 2.9%	13.0	2.4
India	583.4	787.9	917.3	937.3	+60.7%	+4.9%	4.0	0.9

Source : OCDE - *Russia: Growth rate 1995-2000

emissions sector-wide

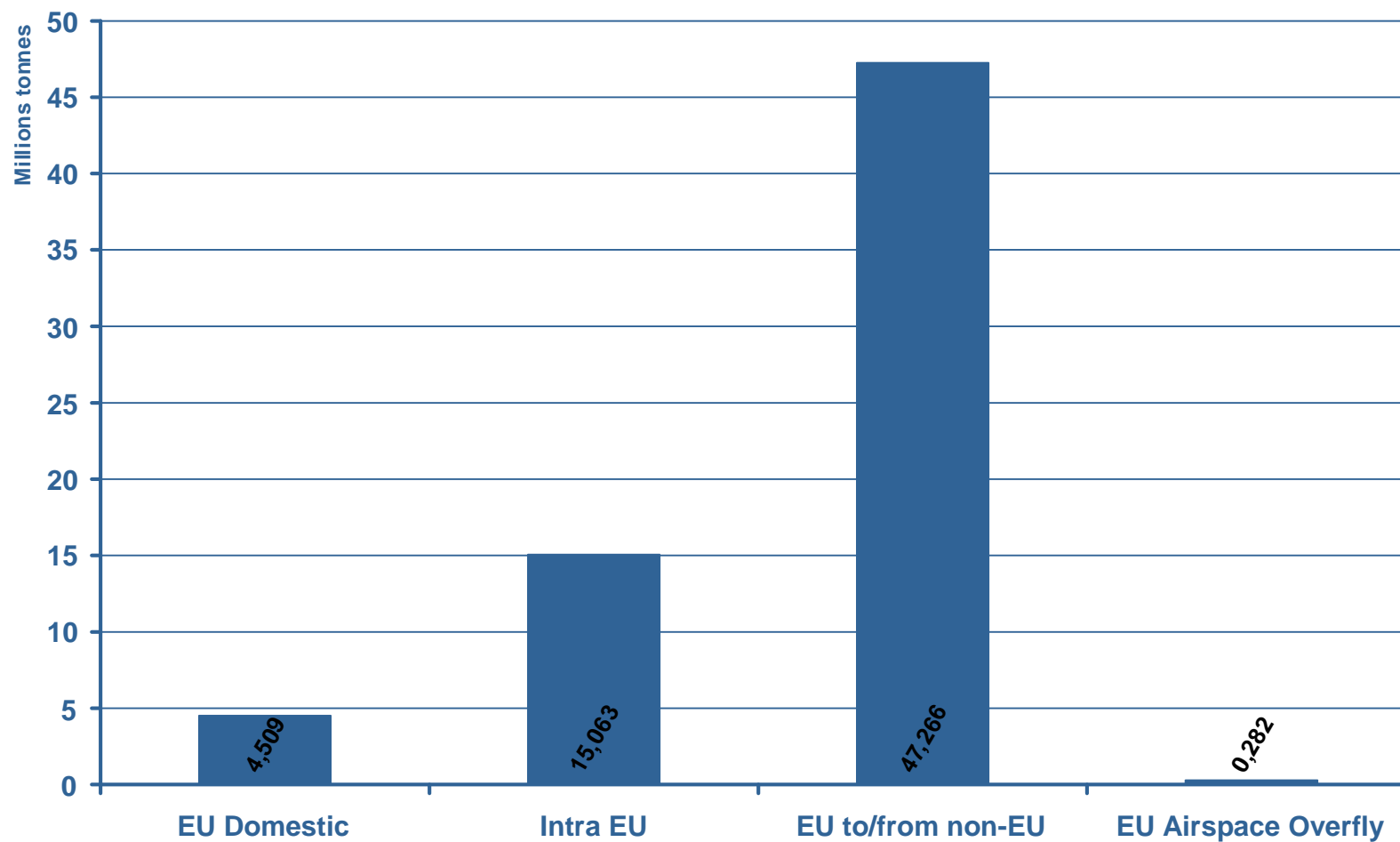
Emissions from Fossil Fuels (Mio tonnes CO ₂)	1990	95/90 % p.a.	1995	01/95 % p.a.	2001	% of EU
EU 15	3075.0	-0.1	3052.0	+0.7	3174.5	100.0
Electricity/Heat	998.8	- 0.9	952.8	+ 0.5	980.8	30.9
Energy branch	130.1	+ 2.4	146.6	- 0.3	143.8	4.5
Industry	572.4	- 1.8	523.6	- 0.8	500.3	15.8
Households/Commerce	638.0	- 0.3	628.3	+ 0.3	639.1	20.1
Transport of which	735.7	+1.7	800.7	+ 2.2	910.5	28.7
Road Transport	625.0	+ 1.6	675.6	+2.0	762.3	24.0
Air Transport	82.2	+ 3.2	96.2	+ 4.6	126.0	4.0
Inland Navigation	19.6	+ 1.0	20.5	- 5.0	15.1	0.5
Railways	8.9	- 1.1	8.4	- 3.0	7.0	0.2

Source: Eurostat

(1) : without fossil fuel for electricity production

(2) : including passenger transport and leisure boating

fuel burn 2004



Source: Eurocontrol

AEA – emissions containment policy

TECHNOLOGICAL PROGRESS

- industry expenditure on R&D 14% of turnover annually
- efficient aircraft (20-25% reduction)
- efficient engines (15-20% reduction)
- alternative fuels

INFRASTRUCTURE IMPROVEMENTS

- ATM-improvements (5-10% reduction)
- European projects: SES, SESAR, CEATS
- airport planning

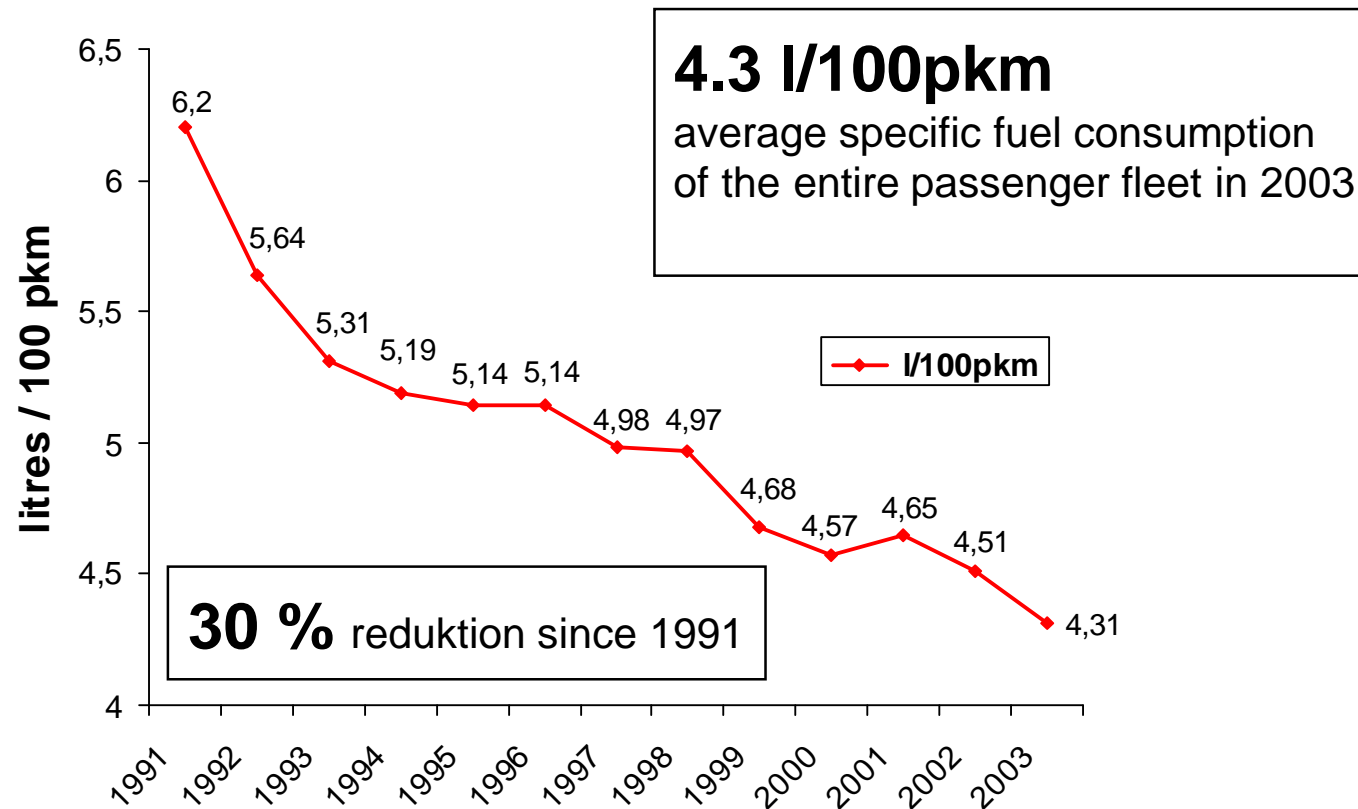
OPERATIONAL MEASURES

- fly the most efficient aircraft/route/speed
- taxi the most efficient route
- operate at the most economical altitude
- maximise the load factor

ECONOMIC INSTRUMENTS

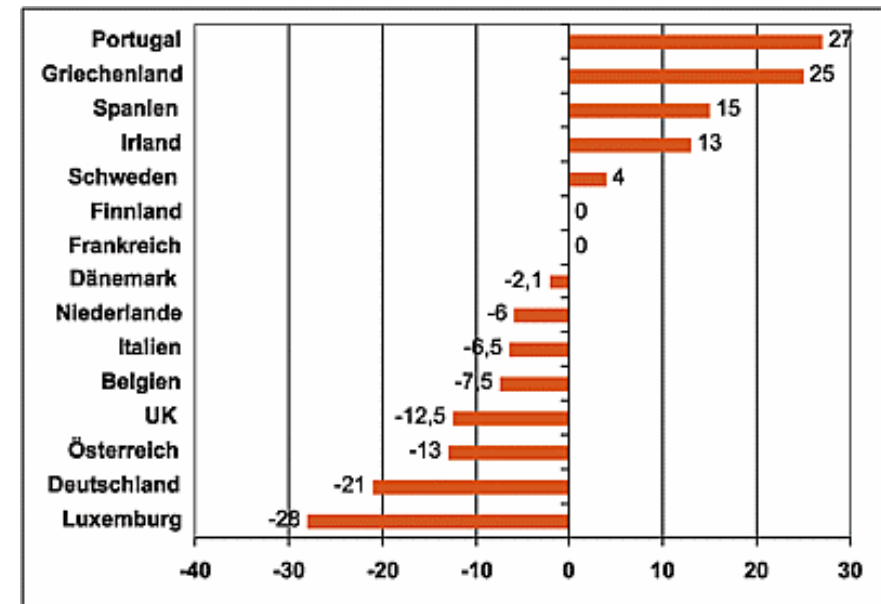
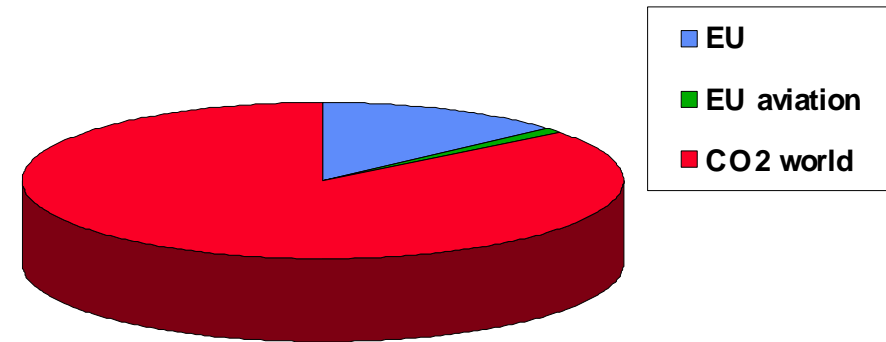
- taxes – not legally applicable to international flights; negligible environmental benefits ☹
- charges – cost-related; revenue-neutral or revenues directed to environmental R&D 😊
- emissions trading – ICAO: “most environmentally effective and cost-efficient approach” 😊

an example of technological innovation



facts & figures

- aviation: **3,5%** of worldwide CO₂
- all EC: **13,5%** of worldwide CO₂
- aviation: **4%** of all EC-emissions
- „EC-bubble“: EC committed to reduce **8%** below 1990-levels
„burden-sharing-agreement“
- every MS pursueing its own target
- only domestic CO₂ emissions are included in targets
- EC: ECCP-W/G investigating in “best possible procedure” - report & legislative proposal by mid 2006
- AEA contributes proactively in order to avoid discussions on taxes/charges



emissions trading scheme - outline

- environmentally and economically EFFICIENT
- COVERAGE - CO₂ only
- GEOGRAPHICAL SCOPE – ideally worldwide
if EU-wide: minimize competitive distortion!
(e.g. by distribution of allowances)
- TRADING ENTITY – aircraft operator!
- ALLOCATION method: allowances based on grandfather rights
- interplay with KYOTO – trade with other sectors
- DISTRIBUTION method – benchmarking
(take into account early action)
- MONITORING method – effective trip fuel measured



Austrian 

thank you
for your
attention!