

"Cap and Trade" and Other Means of Ensuring Societal Resilience in Times of Resource Scarcity

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Cap & trade and resilience

- Caution concerning transfer of nature system concepts to society and law
 - e.g. survival of fittest => social Darwinism
 - e.g. autopoiesis => deregulation => financial crisisNature and society interact but are different (reflexivity)
- Risk of becoming shortlived catchword which is „defined“ rather than induced from reality; mere new label for ongoing research
- What is the core - not already contained in notions of integration, cycles, ecosystem, sustainability?
seriousness of danger and human causation; need to consider more radical alternatives



Cap & trade and resilience

- Cap and trade radical new idea
- What is it and how does it perform?
- Two options for criticism
 - Bottom up complex self-regulation
 - Strengthening command and control elements

Elements of Cap (Allocate) and Trade

- Scarce resource (or resource service) due to overuse
- Determination of use rights (credits, allowances)
- Allocation of use rights (assigned amounts)
- Tradeability of use rights („cap and trade“) or non-tradeability („cap and use“)
- Holders of rights can be states and individuals

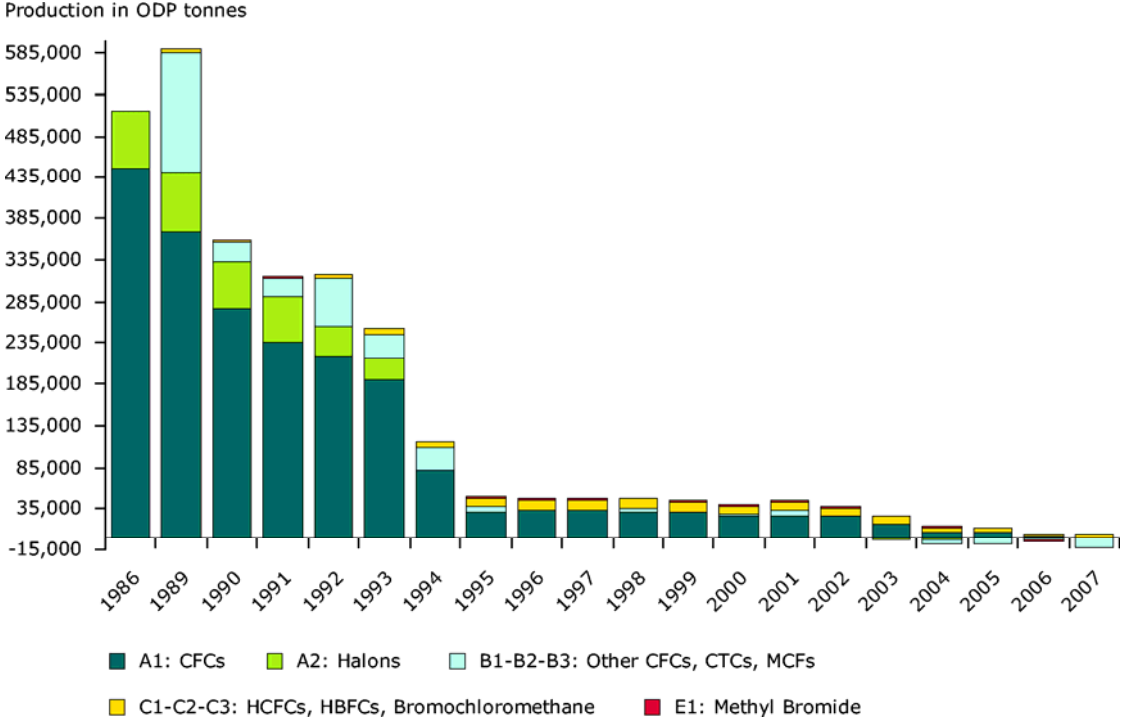
Examples: fisheries

- International
 - weak instruments for quota setting: Fisheries Commissions for high sea regions; coastal states
- EU
 - Overall quotas for fisheries („TACs“) by Council
 - Allocation to MS (grandfathering); tradeable
 - Individual quota of fishers; not tradeable except in NL
- Experience
 - failure
 - TACs too high; politics > science (ICES)
 - Quota in general exploited; some unused quota expire

Example ozone layer

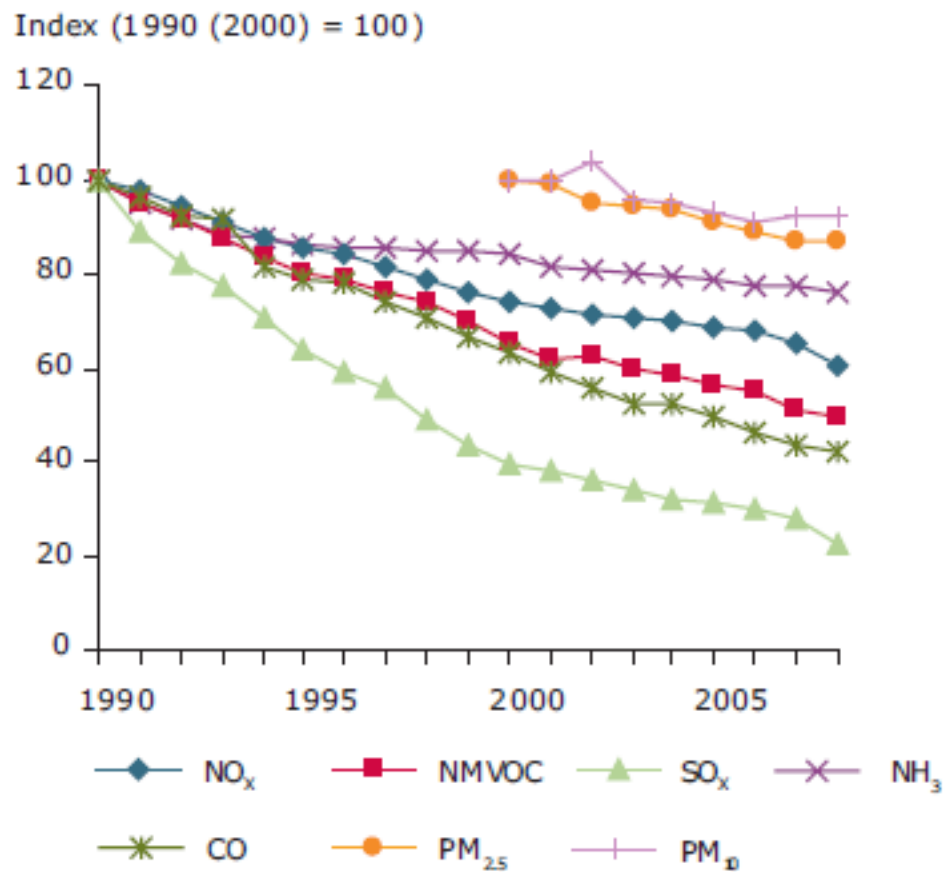
- International
 - Vienna Convention of 1985, Montreal Protocol of 1987, as amended: Overall quota for production and use of ozone depleting substances; tradeable among states
 - 1987: 50% in 12 years; 1990: 85 % in 13 years; 1992: 100 % in 9 years (i.e. by 1996)
- EU
 - overall quota for actors; tradeable
- Experience
 - successful phasing out of emissions; hardly any trading

Production of ozone depleting substances in EEA member countries, 1986-2007



Example acid rain (sulfur dioxide – SO₂)

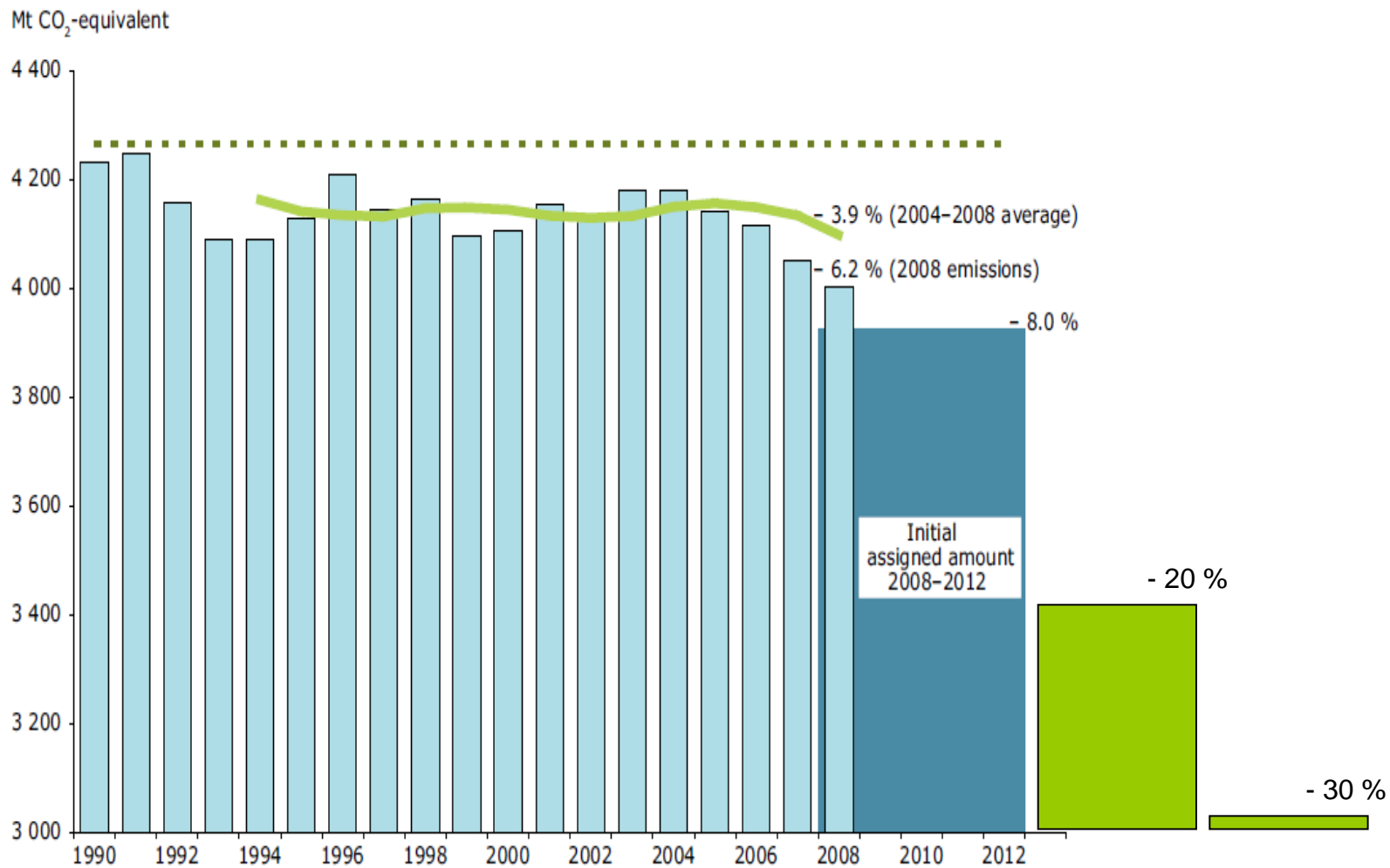
- International level
 - Basis UNECE Convention on Long Range Transboundary Air Pollution (LRTAP) plus subsequent Protocols
 - Caps: 1985: 30 % in 8 years; 1994: 62 % in 25 years; 1997: 75 % in 15 years (i.e. by 2010)
 - No trading
- EU
 - National emission ceilings (NEC)
 - Implementation by command and control (stick & carrot)
 - sector specific BAT for processes and products
 - EQOs
 - subsidies
- Experience
 - Successful phasing out of emissions



Example Climate Protection

- International
 - Kyoto-Protocol 1997: 5 % in 15 years (i.e. by 2012); different commitments of states (assigned amount units, AAU)
- EU
 - 8 % bubble broken down among MS
 - MS AAUs tradeable
- Member States
 - quota allocated to individual actors; tradeable
 - acquisition of additional quota through
 - joint implementation (JI) with project in other Kyoto state => ERU (emission reduction units)
 - clean development mechanism (CDM) with project in non-Kyoto state => CER (certified emission reduction unit)
- Experience
 - Target unambitious; not even reached

Current progress towards EU-15 Kyoto target



Understanding cap and trade

- Two questions
 - how to determine caps
 - whether to make allowances tradeable
- Distinguishing 2 levels
 - states
 - individuals

How to determine quota: level of states

- De ratione
 - Overall quota to be set according to ecological necessity
 - Distribution according to state of national economies; pioneering can stimulate innovation
- De facto:
 - Ecological necessity: ozone and acid rain regimes
 - Feasibility for national economies; sometimes windfall profits: TAC, climate
 - EU slightly pioneering
- De iure:
 - Duty of states to protect? => resource = common concern, common good? Int'l customary law?
 - Allocation of shares => Equality? Of what? Citizens? Historical uses with joint but differentiated responsibility?

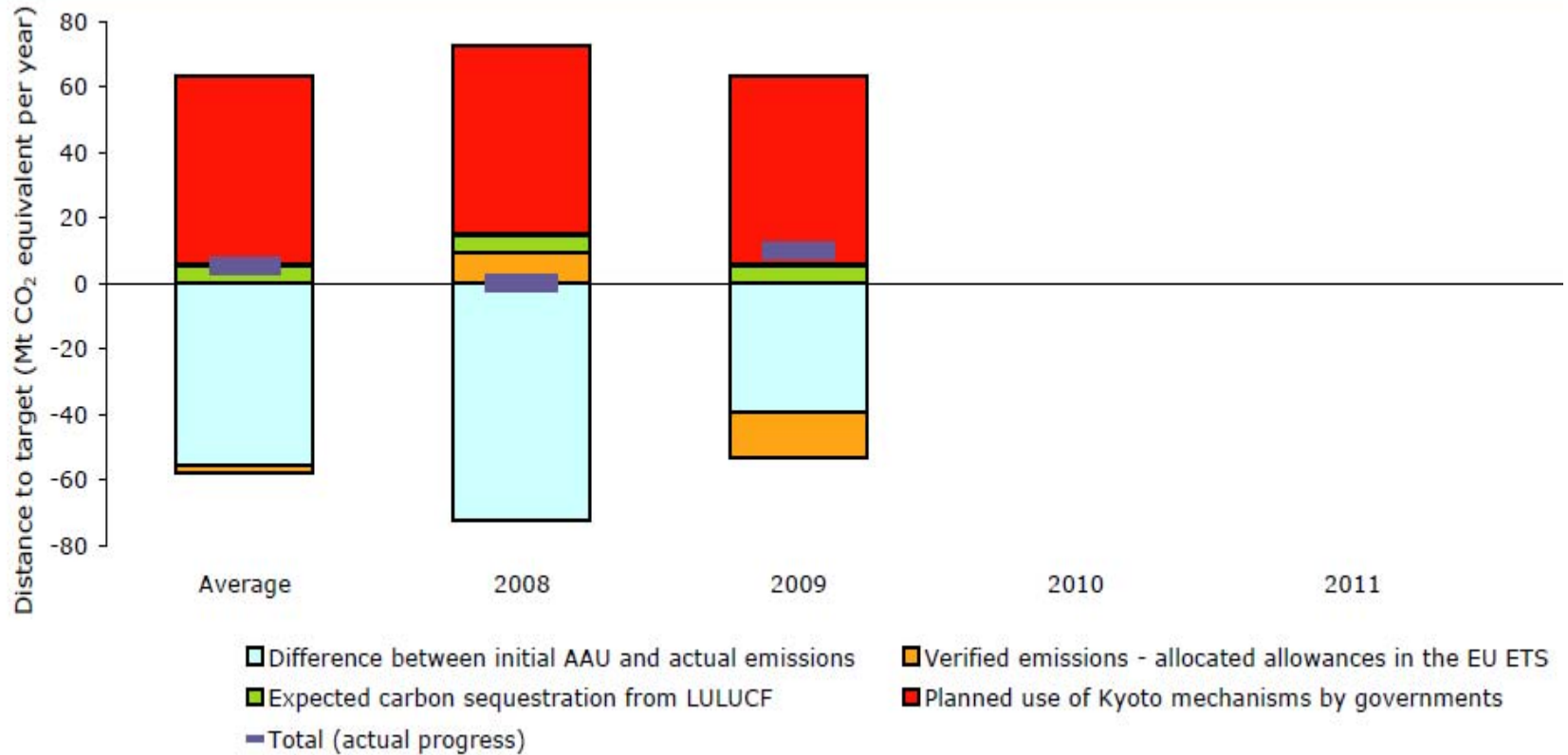
How to determine quota: level of individuals

- De ratione
 - Options: benchmarking (BAT) or pricing (auctioning)
- De facto
 - allocation for free (grandfathering with weak elements of benchmarking); in future auctioning
- De iure
 - Basic rights of resource use => expropriation? Freedom of legislator to redefine property
 - Discretion of legislator to protect resource?
 - objective duty? public interest, trust
 - subjective right of third parties to demand protection; problem of deference of courts to administrative discretion
 - Allocation of shares => equality principle: different treatment permissible if based on sound reason (e.g. benchmarking)

Whether to make quota tradeable: level of states

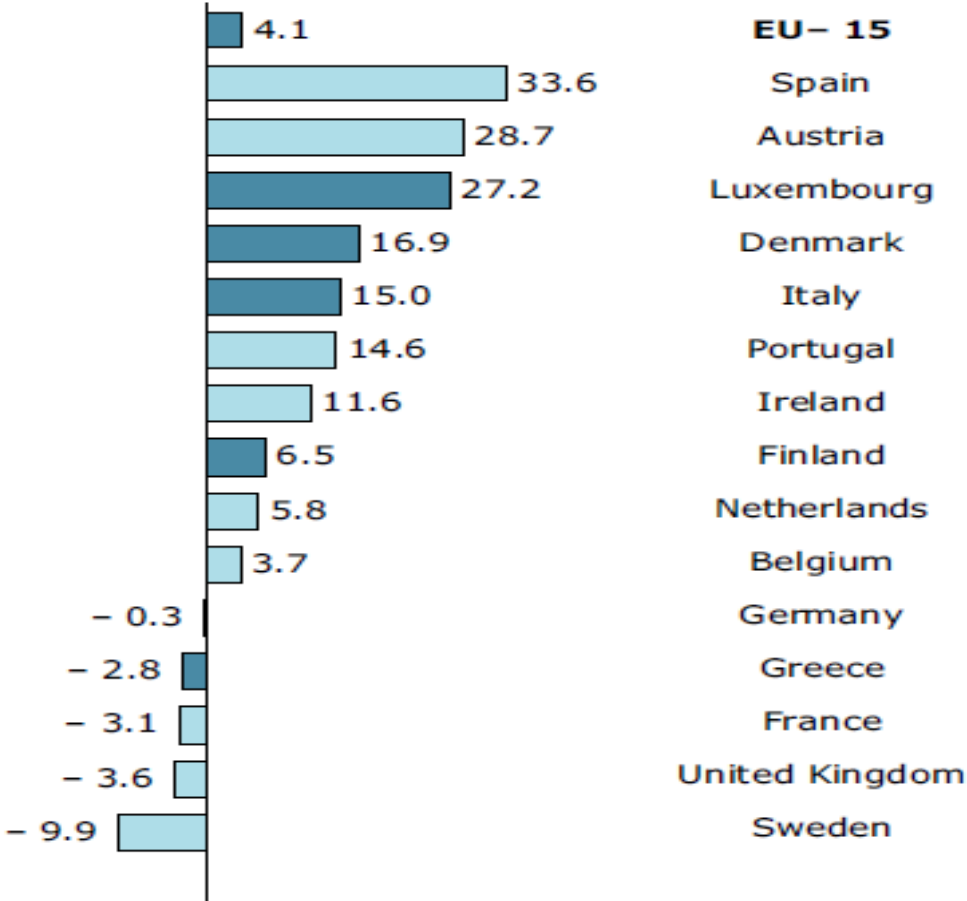
- De iure
 - Tradeability in fisheries, ozone and climate regimes, not in acid rain regime
- De facto
 - Hardly practiced in fisheries and ozone due to extreme scarcity of resource
 - Widely practiced in climate regime, see eg Spain
- De ratione
 - States are political entities, not traders on emission markets (example UK: no sales of surplus AAU planned)
 - Should be confined to a safety valve in cases of hardship
 - Otherwise cheating on climate abatement; mistrust

Planned purchase of AAU by Spain



Note: A positive value indicates emissions lower than the average target.

Gap between average annual emissions in 2003–2007 (light blue) (or 2004–2008 (dark blue)) and initial assigned amounts in EU-15



Whether to make quota tradeable: level of individuals

- De iure
 - Tradeability in climate and ozone regime, not in fisheries and acid rain regimes
- De facto
 - Hardly practiced in ozone regime
 - Widely practiced in climate regime; even more so in post Kyoto round (50 % of reductions)
- De ratione
 - Emission allowances exhaust assigned quota
 - difference with staying allowances or threshold values
 - Possibility of avoidance of duty to reduce emissions through
 - exploitation of cheaper abatement opportunities (trade, JI)
 - importation of quota into the system (CDM)
 - Distortions through speculation

Kyoto compliance equation

Real emissions

Allowable emissions

2008–2012 total GHG
emissions

≡

'initial assigned amount'

+

'net LULUCF removals'
(RMU)

+

'acquisition of CER by
individuals'

+

'purchase by
governments of AAU '

Kyoto compliance equation

- Activities on what side of equation does correspond to principle of joint but differentiated responsibility?
 - Real reduction of emissions
 - Inflation of allowable quota
 - Initial emission quota too high
 - Acquisition of quota through CDM
 - Government purchase of AAUs

Summary

- Quota setting needed in times of scarce resources
- Realistic perception of international quotas: negotiated, not science based
- Trade in state quota should be excluded except in situations of hardship
- CDM should be seriously capped in order to trigger innovation within EU, or imported CERs should be deducted from state quota
- Tools must be designed to trigger additional reductions: exclusion or confinement of tradeability (benchmarking)
- Theoretical frame: cap necessary, but trade tending to commodify climate rather than protecting it

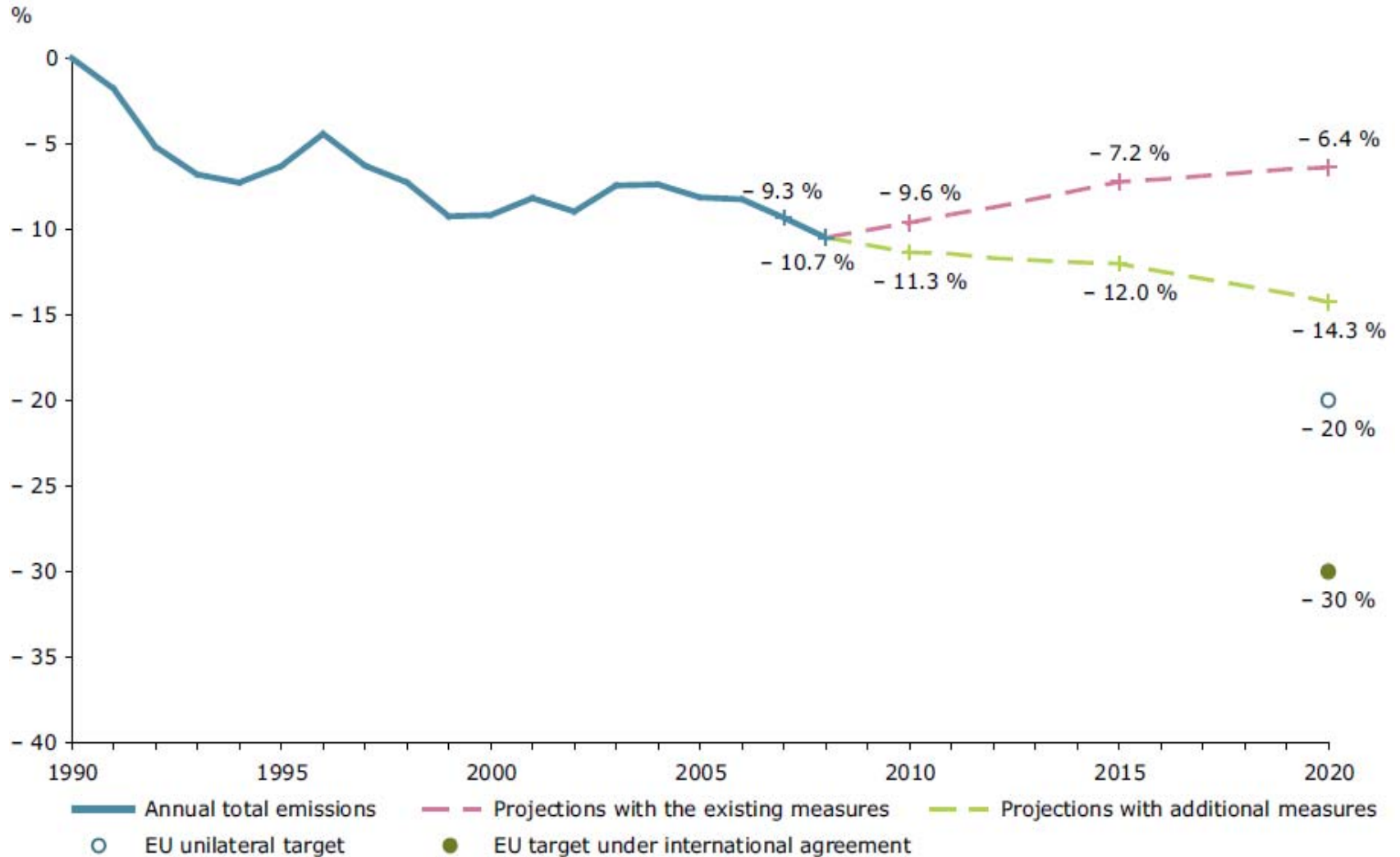
- Further reading:

G. Winter, Rationing the Use of Common Resources:

Problems of Design and Constitutionality, in: T. Prosser, D. Oliver (eds.) In the Regulatory Laboratory, OUP forthcoming

G. Winter, The Climate is no Commodity: Taking Stock of the Emissions Trading System, in: Journal of Environmental Law 2010, pp. 1 – 25.

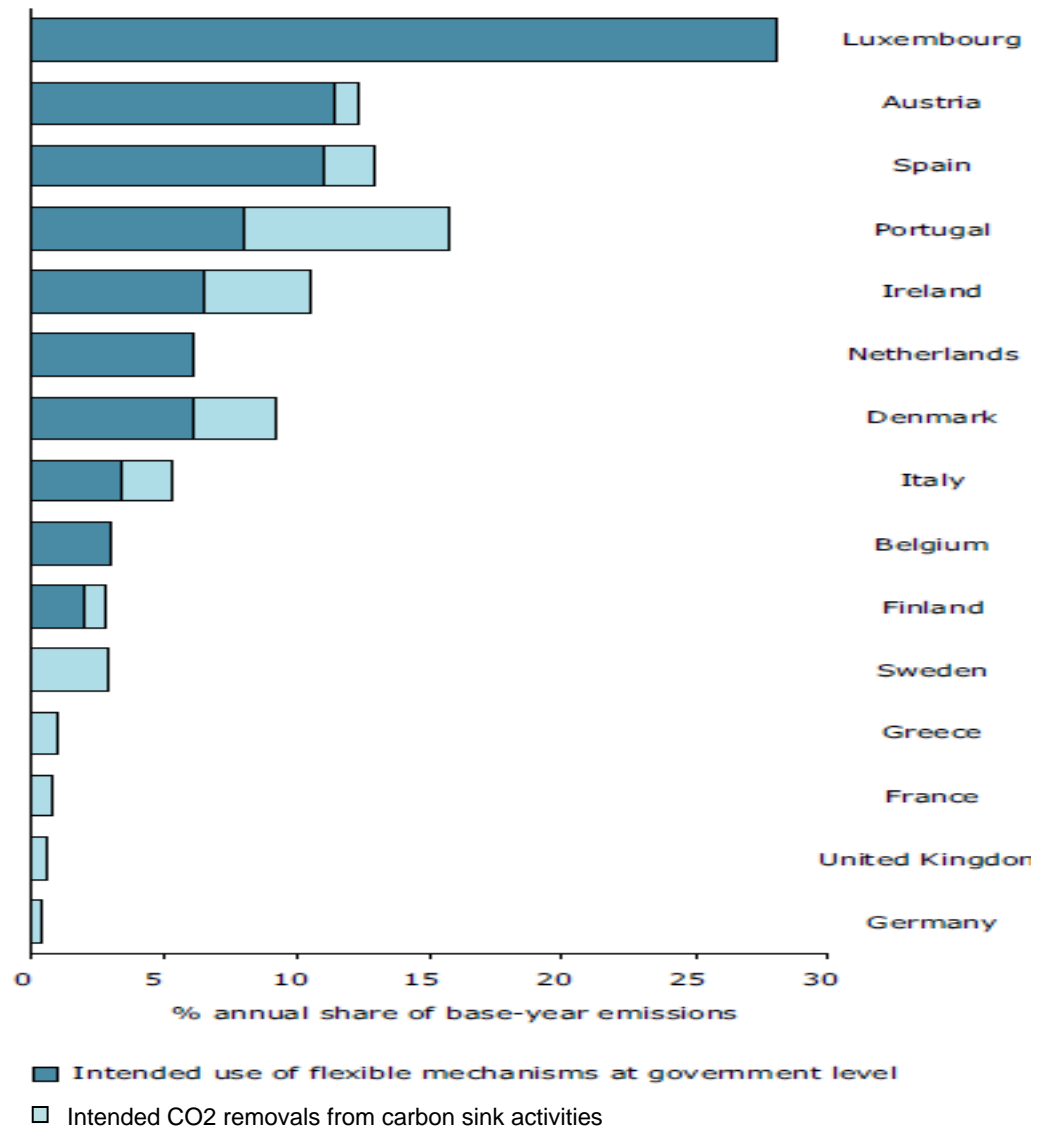
EU-27 GHG emission trends and projections to 2020



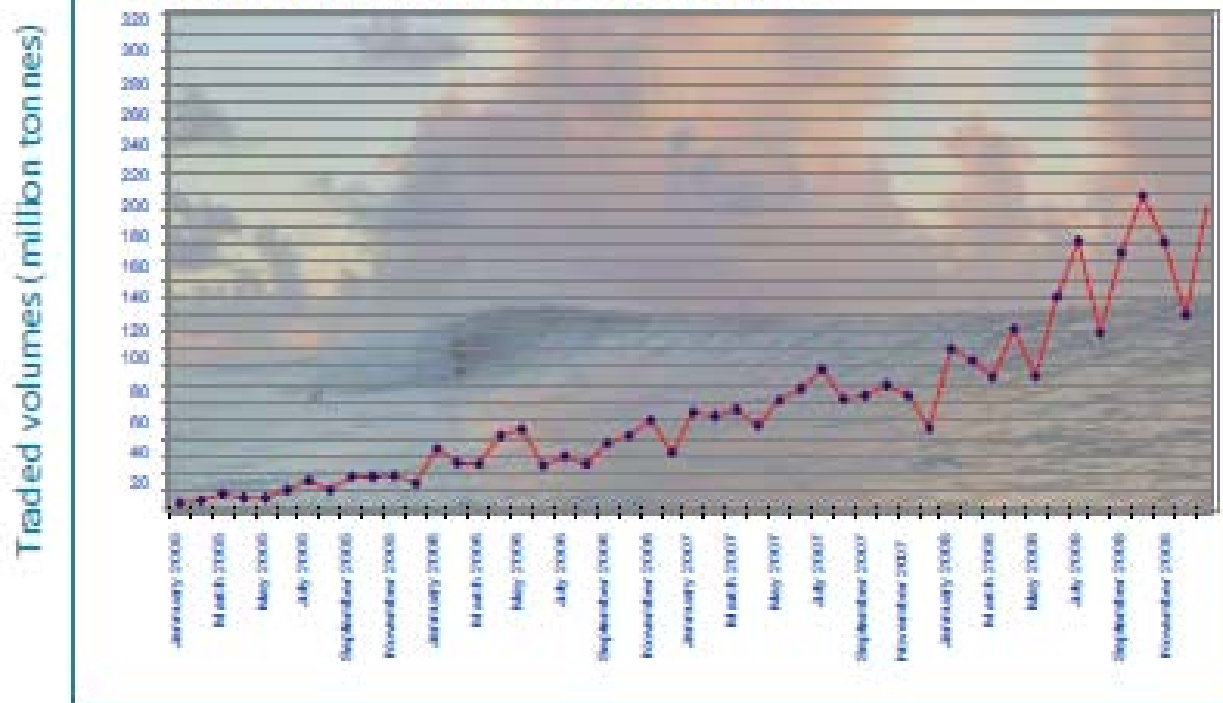
Summary on tradeability

- Expectations:
 - More innovation
 - Less supervision
 - More efficiency
 - Overall more effectiveness
- Doubts
 - More innovation? No incentive to innovate in grandfathering system => benchmarking needed
 - Less supervision? double effort, technical and financial; esp. CDM; alleviation concerning small installations/ projects
 - More efficiency?
 - external factors (e.g. economic decline)
 - Speculation (futures etc.)
 - Less effectiveness

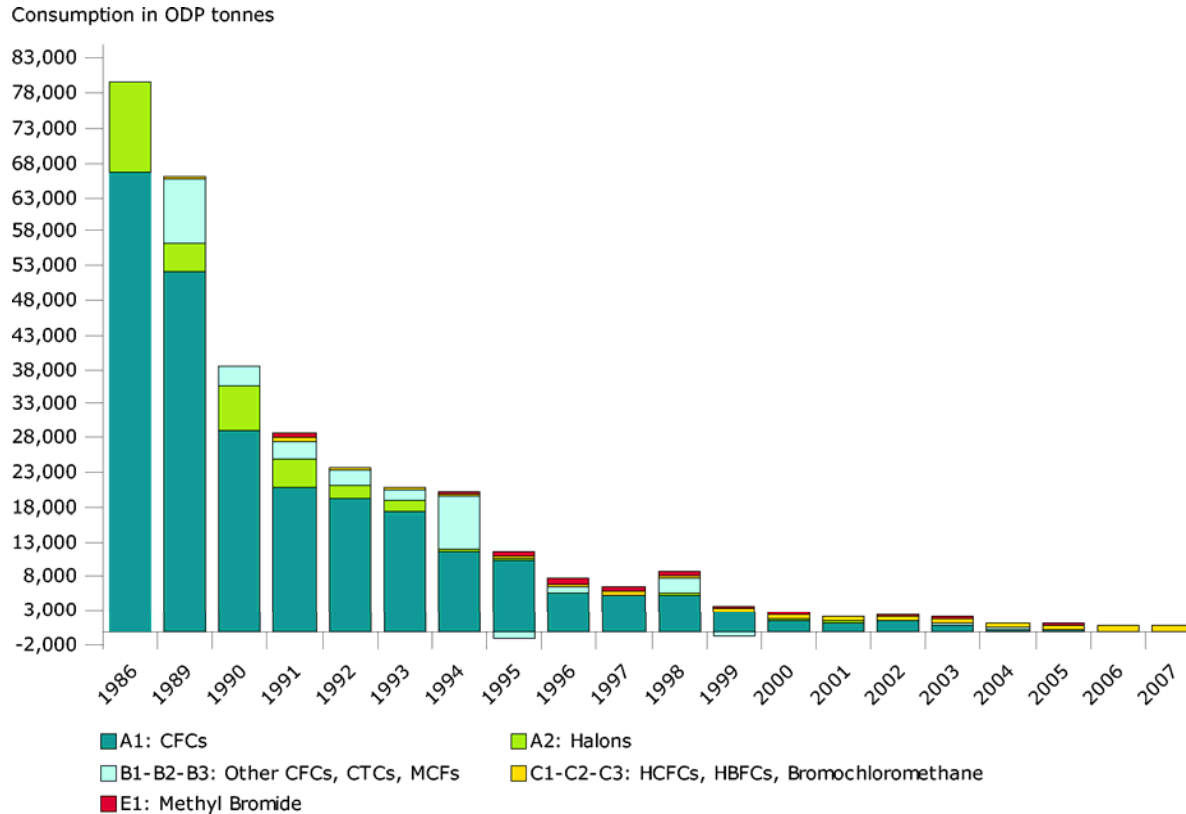
Projected contributions of the EU ETS, Kyoto mechanisms and carbon sinks on the overall change of assigned amounts

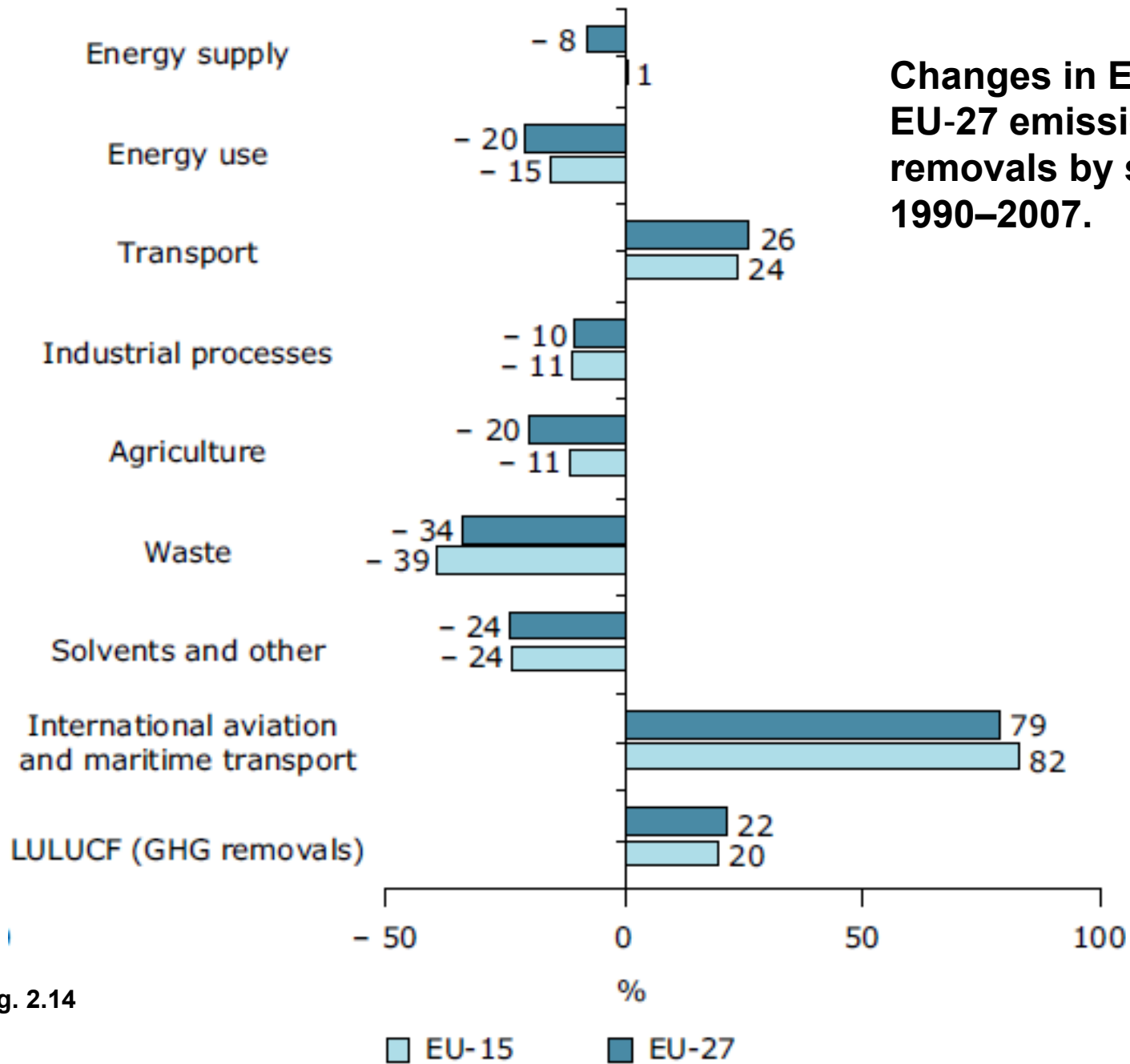


Traded volumes of EU allowances⁵

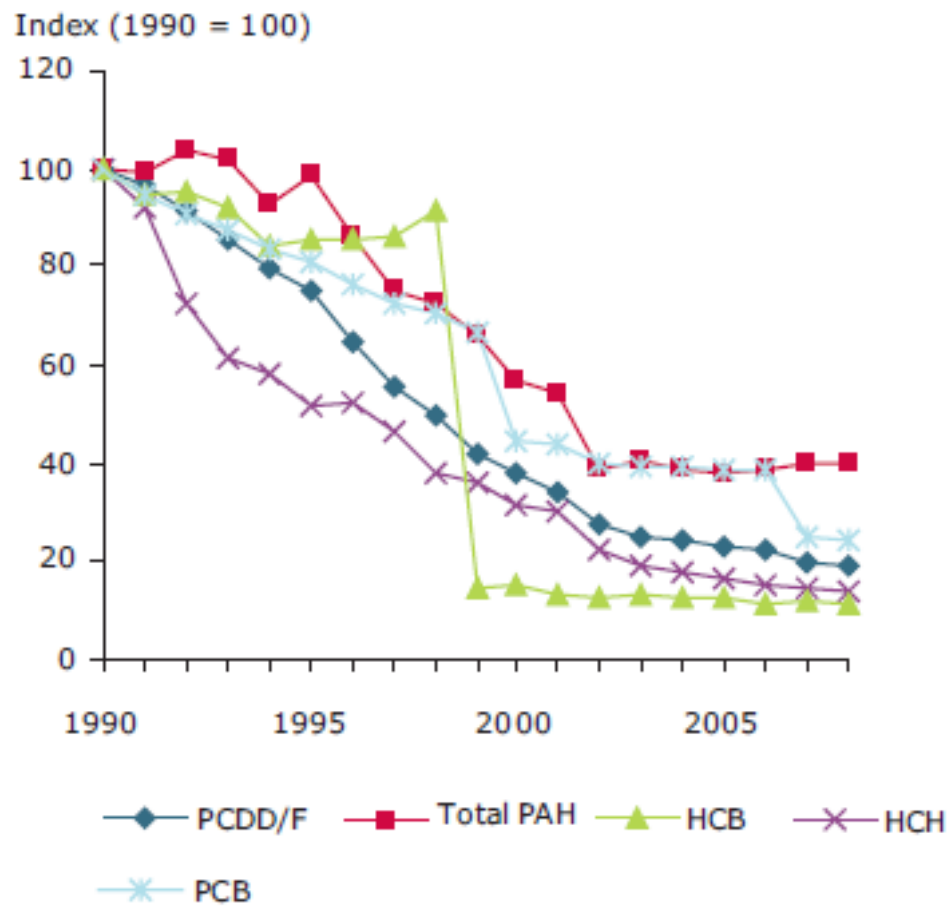


Consumption of ozone depleting substances in EEA member countries, 1986-2007





EEA 2009, Fig. 2.14



A Note on Resilience and the Law

Resilience	Law
Socio-ecological interlinkage	Law is a social phenomenon
Non-linear trajectories and uncertainty	Simple and representative indicators needed for governance
Creative destruction, surprise	Protection of individual rights, legal certainty, responsibility for damage
Self-organisation, bottom up	Commendable, but: self-organisation needs legal frame; exclusion of options can stimulate inventiveness

Substances (Base level)	1987 Montreal Protocol	1990 London Adjustments	1992 Copenhagen Adjustments	1995 Vienna Adjust- ments	1997 Montreal Adjust ments
CFCs 11, 12, 113, 114 & 115	Freeze at 1986 levels by mid '89 <u>50% reduction by mid '98</u>	<u>85% reduction in '95</u> Phase-out in 2000	<u>100 % Phase- out in '96</u>	No change	No change
Methylbromide	Not covered	Not covered	Freeze at '91 levels by '95	<u>Phase-out by 2010</u>	<u>Phase-out by 2005</u>