

Environmental Economics and Policy: Memo 6

1. Emission Trading Systems

USA: 1990 CAA Amendments, CAP Program for SO₂ (EPA Acid Rain Program)

Phase I (1995-2000): 110 Electric power plants

Phase II (2000-): about 1,000 Electric power plants

NO_x CAP Program (2005-2009)

UNFCCC (1992)-Kyoto Protocol (1997, enacted 2005): Kyoto flexible mechanism

Emission Trading: ET

Joint Implementation: JI

Clean Development Mechanism: CDM

Cap and Trade System

Initial Cap Allocation: efficiency and fairness,

Baseline (Grandfathering), Benchmarks for free allocation, and Auctioning

EU-ETS I (2005-2007)、EU-ETS II (2008-2012)、EU-ETS III (2013-)

Japan: JETS

Tokyo Metropolitan Government: ETS I (2010-2014), ETS II (2015-2019), 1,300 plants

ICAP (International Carbon Action Partnership): EU, USA (States 2009), Canada (2010), NZ (2008),
Australia (2011), Japan (JETS 2008)

2. VA: voluntary approach

- Pollution control agreement: local governments and private company

1964 Yokohama, 1969 Tokyo. 32,177 agreements (2003)

- Certification: ISO14000: 1996, Creation of EMS: Environmental Management System⇒CSR

Japan 18,869, World 88,800 (2005)

Eco-labeling; 1989 Eco-mark (ISO14020, ISO14024); 47 categories, 4,600 brands

- Environment Audit/ Environmental Report

- CSR (corporate Social responsibility); SR (social Responsibility), ISO26000

3. Cost Benefit analysis in Environmental Policy

Environmental Policy Evaluation, Policy Cycle and evaluation

Evaluation Criteria: single criterion and multi-criteria

Single criterion: cost benefit analysis, cost effectiveness analysis, risk benefit analysis

Multi criteria: OECD/DAC 5 criteria

References

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- * Boardman, A.E., D. H. Greenberg, A. R. Vining, and D. L. Weimer (2006), *Cost-Benefit Analysis: Concept and Practice (3rd ed.)*, Person Prentice Hall.