Environmental Economics in the Central European Context

Time: Tuesdays 4:00pm-7:00pm
Location: at CERGE-EI, Room # 11

Instructor: Jana Krajcova, PhD.
Email: krajcova.janka@gmail.com
Reading materials: http://home.cerge-ei.cz/richmanova/Teaching.html

9 Environmental Policy in European context – History and current problems

Axelrod, R. (2004), Nuclear Power and EU Enlargement: The Case of Temelín. Environmental Politics, 13, 153-172.

Q:

Do you consider nuclear power green?

What is the major controversy about nuclear power? What do you think about it?

Do you believe nuclear power can be safe?

Would you mind living in the proximity of nuclear power plant?

- ➔ Issue of the nuclear power and its future in Europe
- ➔ the controversy over the Temelin nuclear power plant (TNPP) in CR transformed from a domestic issue to an international one (by 2001)
- ➔ a major controversy affecting the enlargement of the EU and a nightmare for the foreign relations of the Czech Republic

Q: Why Austria opposed completion of the Temelin? What kind of leverage did Austria use to persuade the Czech government? Do you think Austria was right doing that?

- ➔ the case raised questions about the future of nuclear power in Central and Eastern European (CEE) countries – as well as the rest of Europe.
    - relationship between the member and the candidate states (at the time, the CR was only applying for EU membership)
    - the role of EU, and future of (common) nuclear power policy in general

Historical background

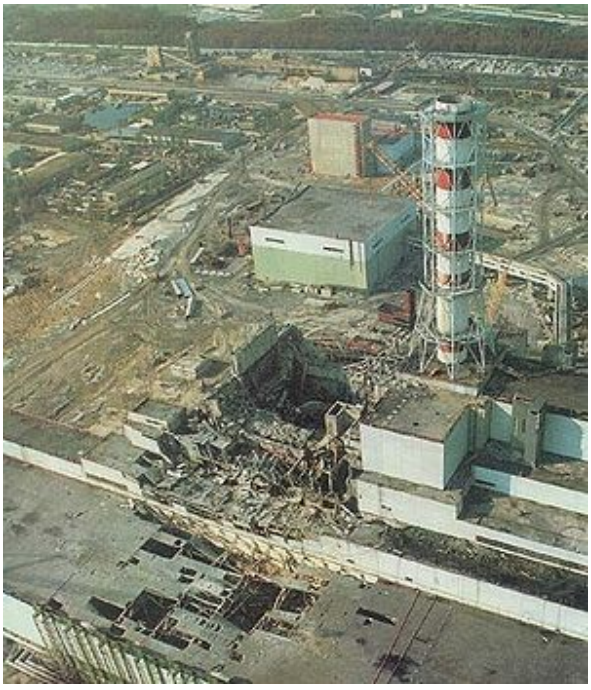
- 1986 Chernobyl disaster => issue of the safety of nuclear power facilities

*The **Chernobyl disaster** was a nuclear accident of catastrophic proportions that occurred on 26 April 1986, at the Chernobyl Nuclear Power Plant in Ukraine (then in the Ukrainian*

Soviet Socialist Republic, part of the Soviet Union). It is considered ***the worst nuclear power plant accident in history*** *and was the only level 7 event on the International Nuclear Event Scale [until Fukushima in Japan in 2011]*

The disaster occurred on ***26 April 1986,*** *at reactor number four at the Chernobyl plant, near the town of Pripyat, during* ***an unauthorized systems test****. A sudden power output surge took place, and when an attempt was made at an emergency shutdown, a more extreme spike in power output occurred which led to the rupture of a reactor vessel as well as a series of explosions. This event exposed the graphite moderator components of the reactor to air and they ignited; the resulting fire sent a plume of radioactive fallout into the atmosphere and over an extensive area, including Pripyat. The plume drifted over large parts of the western Soviet Union, and much of Europe. As of December 2000, 350,400 people had been evacuated and resettled from the most severely contaminated areas of Belarus, Russia, and Ukraine. According to official post-Soviet data, up to 70% of the fallout landed in Belarus.*

Despite the accident, Ukraine continued to operate the remaining reactors at Chernobyl for many years. ***The last reactor at the site was closed down in 2000****.*



Russia, Ukraine, and Belarus have been burdened with the continuing and substantial decontamination and health care costs of the Chernobyl accident. A 2006 report prepared by the Chernobyl Forum, led by the World Health Organization (WHO) states, "Among the 134 emergency workers involved in the immediate mitigation of the Chernobyl accident, severely exposed workers and firemen during the first days, 28 persons died in 1986 due to ARS (Acute Radiation Syndrome), and 19 more persons died in 1987-2004 from different causes. Among the general population affected by Chernobyl radioactive fallout, the much lower exposures meant that ARS cases did not occur". It is estimated that there ***may ultimately be a total of 4,000 deaths attributable to the accident, due to increased cancer risk.***

- 1992, the G-7 countries (Canada, France, Germany, Italy, Japan, the UK and the US) agreed that **Russian-designed nuclear power plants should be closed owing to safety**

concerns, and that **financial assistance** would be given to replace nuclear power with renewable and alternative energy sources.

- CEE governments and their nuclear industries wanted to keep plants open to avoid losing their investments. => **plants upgrades** => extended lifetime, rise of the nuclear industry in CEE (equipment, instrumentation and control systems (I&C), nuclear waste storage facilities)
- Western Europe (particularly France and Belgium) had excess electricity to sell and the nuclear industry was anxious to find new markets, particularly in CEE countries and Asia, **the policy to upgrade Russian-designed plants established a vast new market benefiting suppliers of nuclear technology**, particularly US and European nuclear engineering companies => the ability of Western European and North American governments to achieve closure of Soviet/Russian-designed nuclear power plants across CEE and former Soviet regions proved quite **limited**

The Origins of Temelín

Communist era in Czechoslovakia

⇨ high energy intensity, low energy prices, and inefficient energy production and electricity transmission

⇨ Czech heavy industry and chemical production required a reliable supply of electricity

⇨ nuclear power seemed to be a viable alternative

Q: Based on what you read, do you think Temelin was safe?

1978 - the decision for construction was **approved** (Temelín is located in the southern part of the Czech Republic, cca 80 km from the Austrian border)

1986 - **construction began**

- after the Chernobyl accident => a review of Temelín's design => **halt in construction**

1992 - new government to decide about construction => completion of the TNPP2 (no adequate information on electric supply and demand, absence of public debate)

- studies by the International Atomic Energy Agency (**IAEA) found flaws in the design of Temelín, and recommended replacement of the I&C** (instrument and control) systems. There were also questions regarding the use of Russian fuel as well as the fuel cycle itself, contributing to higher levels of radioactive waste than Western designs.

1993 - after a controversial and questionable bidding process, **Westinghouse** was awarded a contract to graft Western technology on to the Russian-designed reactors.

The Austrian position

➔ influenced by its proximity to the plant (Temelin about 80km=50miles) and the fact that it is a non-nuclear state.

➔ early 1990s

when the contract with Westinghouse to upgrade Temelín was being considered => lobbying against the TNPP in the US Congress

(similarly, Austria later opposed the completion of the Slovak Mochovce nuclear power plant in 1998).

➔ By 2000

the Austrian position was complicated because of the nature of its coalition government, difficult to reach a political agreement => widening the scope of conflict to other European states and international NGOs => a campaign against nuclear power in Eastern and Western Europe

Q: What was the role of European union? Why it was complicated?

➔ September 2000

- the Austrian Parliament approved **a resolution to block Czech entry into the EU** because of Temelín.
- BUT there exists no EU competency for nuclear power plant regulation, as number of states are nuclear, including France and the United Kingdom -> wary of opening a Pandora's box of regulatory debates.
- **EU member states (and publics) remain quite divided on nuclear power issues.**
  - 7 of the 15 member states have nuclear power plants,
  - 8 of the 12 candidate [new members by now] states are nuclear.
  - countries such as Austria have totally banned nuclear power; Sweden and Germany are officially engaged in phasing out their nuclear power facilities (8 closed permanently after Fukushima disaster, nine more to be closed by 2022)=> lack of agreement within the EU

➔ October 2000

- nuclear fuel activated in the first Temelín reactor
- Austria moved to widen the controversy to Brussels.
- autumn 2000 - anti-Temelín forces set up blockades on the borders between the Czech Republic and Austria to increase public attention on the issue.
- Austria started to threaten blocking the closing of the Czech energy chapter in the EU accession negotiations (which could have jeopardized the entire accession process, as veto of any of the 31 chapters by even a single EU member state would have prevented the accession to the EU).
- Czech officials thought the issue would rise to the level of potentially blocking Czech accession to the EU...

⇨ Eventually, the EU became an important player **mediating between two states with unequal status** – a member state and a candidate state

- At the request of the Czech foreign minister, Jan Kavan, the Commission offered to act as mediator at the end of 2000.

- Both Austria and the Czech Republic agreed to the mediation. The result was **the Melk Agreement**, the result of many hours of tedious negotiation.

Q: What kind of agreement did the EU help to achieve? Do you think the EU has done enough?

- The Czech Republic agreed to an **Environmental Impact Assessment (EIA) with EU participation** (The Commission later concluded that the environmental impacts were considered to be insignificant and acceptable)
- Austria said it would **cease threatening** to block the closing of the energy and environmental chapters and to protect the borders from further blockades.
- As an early warning system for extraordinary events, **a hotline** was established from Temelín to the Austrian Federal Atom Center at the Interior Ministry to supply updated studies on breakdowns and uncontrolled release of radioactivity.

⇨ Between February 2001 and July 2001, in a parallel process, there were ongoing discussions (not smooth) between the EU, Czech nuclear experts and Austria.

⇨ Surprisingly, EU Enlargement Commissioner Gunter Verheugen suggested at some point that **Temelín would 'probably be the safest nuclear plant in Europe'** (*Prague Post*, 29 November 2000).

⇨ **German approach:** In July 2001, the German government formally asked the Czech government to revise its decision to put Temelin into operation. **EON, a German power company, said it would cancel contracts with CEZ to import electricity**. Meanwhile, Bavarian border towns launched a campaign to stop Temelín with petitions. A difficulty with the boycott strategy was the inability to distinguish between sources of electricity. Other German companies kept the CEZ (Czech energy producer) contracts and purchased electricity indirectly through ENRON. **Germany never threatened to block Czech accession over Temelín**, although it is committed to close its own nuclear plants

⇨ **Difficult role of the EU**:

- there are no common EU standards -> which national standards should apply? German, French and British standards are not the same.
- Czechs officials argued that the EU could not apply pressure to candidate states about nuclear power because it lacked the competency to do so with existing members.
- However, the EU position was that it could force an EIA [Environmental Impact Assessment] on non-members even though it was not called for in EU legislation.

⇨ The conclusions of the Melk Process issued on 29 November 2001, defined a follow-up process. The agreement between the Czech Republic, Austria and the EU was 130 pages long. **Each state recognized the sovereign right to its own energy policy**, but there would be **joint monitoring and cooperation** to increase energy efficiency.

⇨ but the struggles continued …

⇨ **Why did Austria finally abandon the veto of Czech accession?**

- Austria lacked support in the EU Council
- internal political issues: Chancellor Schussel risked jeopardizing the strength of his coalition in a long, difficult and unpleasant fight.

- There was, in fact, no legal basis for stopping Temelín.

⇨ At the December 2002 **Copenhagen Summit**, at which the CEE states were invited to join the EU, **Austrian officials wanted to embed Melk protocol to the accession treaty** with the Czech Republic

- that would make the Melk Protocol subject to international law and subject to enforcement by the European Court of Justice.
- Lacking an EU nuclear energy policy and given the influence of the nuclear states, the attempt failed and the Melk Agreement remains a bilateral agreement.
- + nuclear member states may have feared that such a move might put other nuclear power plants under European Court jurisdiction with possible lawsuits initiated by antinuclear groups.

⇨ **Role of Czech NGOs:**

⇨ **Q: What was the role of the Czech NGOs? Did they fulfill it? What they should have done?**

⇨ Czech NGOs were **never really successful in challenging the government position** favoring Temelín,

⇨ it was the **intervention of foreign NGOs** and green political parties which forced the public hearings and EIA within the context of the EU accession process.

⇨ meanwhile, Temelín's technical problems continued

- most of the shutdowns and delays at Temelín were due to technical problems in the non-nuclear system
- Western European Nuclear Regulators Association (the EU's nuclear safety advisory body) reported **some safety concerns on the basis of the different safety concepts in Eastern and Western technology**, which did, and would, continue to cause technical problems and delays
- through 2001 and 2002, there was number of closures of the plant's operations
- in mid-January 2002, technical malfunctions caused the plant to discontinue testing at 100 % capacity.
- A two-month shutdown occurred prior to June 2002.
- problems continued into 2003 as Unit 1 experienced additional shutdowns
- after Unit 2 was launched in May 2002 it too had technical problems
- although both units have been connected to the grid, by early 2003 they were still not contributing a continuous and reliable energy supply

Energy Policy in the Czech Republic

⇨ The Czech Republic has been trying to move closer to EU policy in the energy sector.

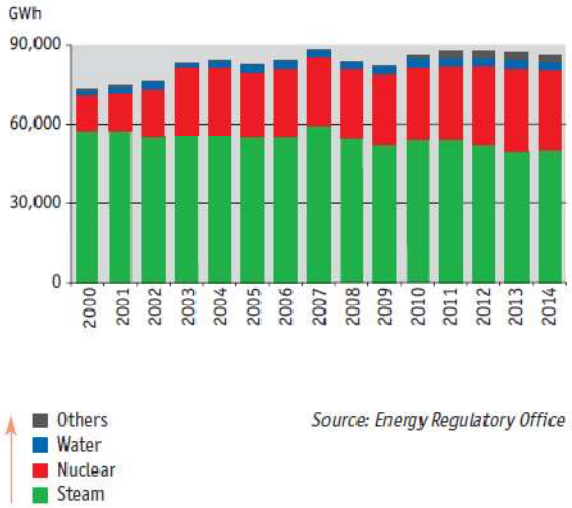
⇨ Even though the energy intensity has been on a downtrend, it still remains high compared to other countries

⇨ As of 2004, over 75% of electricity generated from fossil fuels, 3% from hydro, 20% from nuclear, and an insignificant amount from renewable resources

- ⇨ As of 2014, the share of renewables has increased (see the charts below)
- ⇨ the pressure to reduce air pollution from coal mining and coal burning, **coal is not projected to have a long-term future** unless environmental regulations are modified.
- ⇨ In the 1990s, the government encouraged the public **to switch from coal to electricity** by subsidizing the price of electricity. This increased demand was used as a justification for completing Temelín.

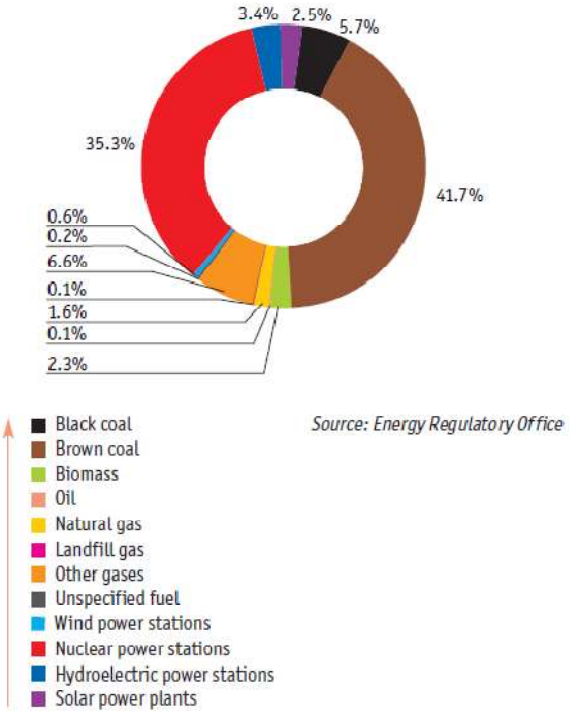
Recent data:

Chart 1 → **Electricity generation by power plant type in the Czech Republic [GWh], 2000–2014**



Source: Energy Regulatory Office

Chart 2 → **Electricity generation by fuel type in the Czech Republic [%], 2014**



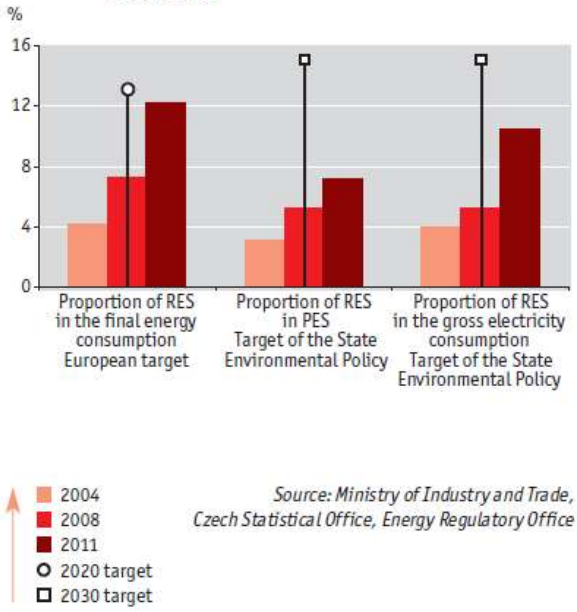
Source: Energy Regulatory Office

- ⇨ The Czech government has also stated that any new plants built after 2015 will have to use primary sources other than coal.
- ⇨ With nuclear power cast as a strategy to comply with the UN Framework Convention on reduction of greenhouse gases, it appears that a nuclear future is part of the country's long-term energy policy.
- ⇨ In spring 2003, the Minister of Industry and Trade proposed a draft plan that would double the size of Temelín. It was met with criticism.
    - [*Plans to build all four original reactors were reopened in 2005. In 2007 planning was suspended because a new coalition government agreed not to promote nuclear energy as a Green Party was involved in coalition. However, in July 2008 ČEZ requested the Ministry of the Environment conduct an environmental impact assessment for two additional reactors. In 2009 regional approval was granted for*

the new build. ČEZ plans to begin construction in 2013, with completion of the first new block in 2020…. tender and negotiation with two bidders still continue]

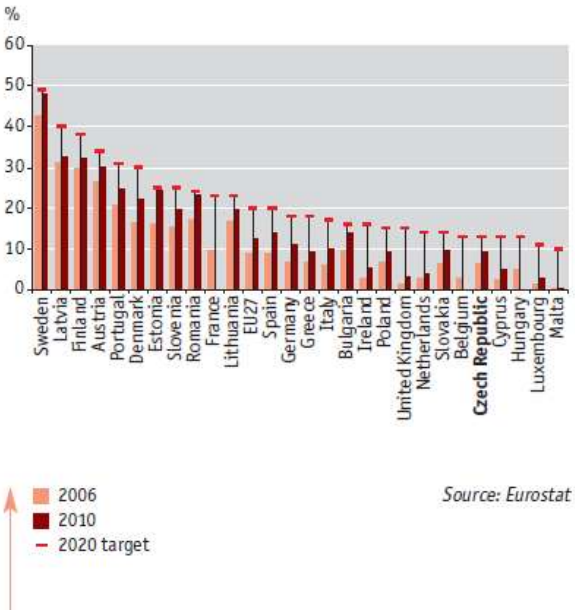
⇨ share of renewable energy is expected to grow (it was slightly above 4% in 2009, almost 10% in 2010, the plan is to reach 13% by 2020).

Chart 3 → **Targets for RES and the state of their implementation in the Czech Republic [%], 2004, 2008, 2011**



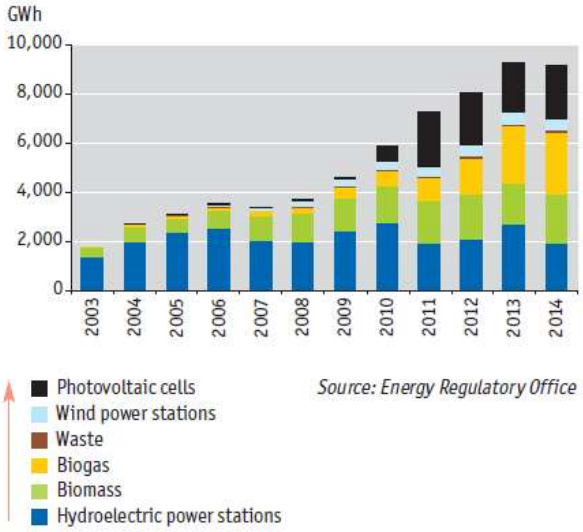
Source: Ministry of Industry and Trade, Czech Statistical Office, Energy Regulatory Office

Chart 4 → **International comparison of proportions of RES in gross electricity consumption [%], 2006, 2010**



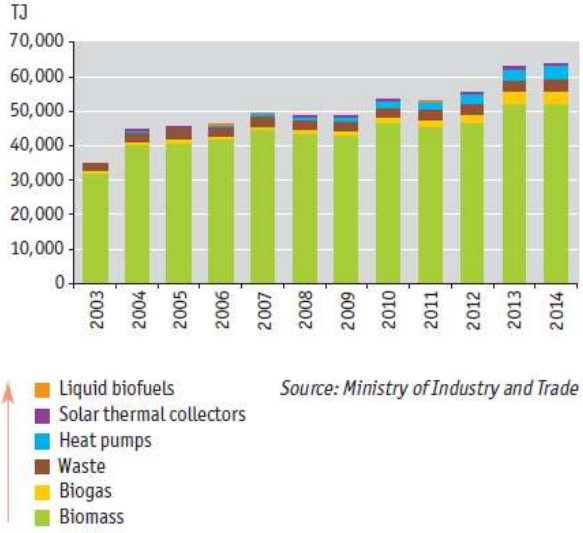
Source: Eurostat

Chart 1 → **Electricity generation from RES in the Czech Republic [GWh], 2003–2014**



Source: Energy Regulatory Office

Chart 2 → **Production of heat from RES in the Czech Republic [TJ], 2003–2014**



Source: Ministry of Industry and Trade

⇨ The mining of uranium has supported the nuclear power industry. Run by the state company Diamo, it employs about 1,000 workers.

⇨ There are plans for energy savings programs by the State Energy Agency. Because they estimate that more funds will be needed than are available, they are looking to the EU and the World Bank for support.

⇨ There is also government support for energy audits, efficiency standards, labeling of appliances, and co-generation

Conclusion

- The Temelín case illustrates the limits of existing environmental policy not only in the Czech Republic, but among the member states of the EU where the long-term impact of nuclear energy has not been considered fully.
- Similarly, the World Bank has also met with mixed results in its attempts to close Soviet-designed nuclear power plants in Slovakia and Ukraine.
- EU approval of Temelín, while keeping the issue separate from Czech accession, overlooked difficult issues concerning nuclear safety and the desirability of an enhanced nuclear future.
- **EU funds for nuclear power compete with commitments to support renewable energy**.
- **need for an EU-wide debate** about the appropriate energy mix necessary for meeting sustainable environmental goals.
- Yet, some attempts to set EU-wide minimum safety standards based on those from the International Atomic Energy Association are moving forward, partially as a result of the enlargement process.
- The intense bilateral negotiations over Temelín between the Czech Republic and Austria coincided with the Czech accession process.
    - Czechs: if the plant was deemed unsafe by EU standards it could be closed; the plant has been scrutinized more than any Western-European one.
    - Austrians: threatened to veto both the environment and energy chapters unless a new and comprehensive assessment was made of Temelín; the goal was to close Temelín or delay Czech accession -> this was interpreted as extreme pressure or blackmail, also as an outside interference threatening sovereignty by most Czechs
- The problem was that there was no guidance from the EU because it could not agree on a nuclear policy.
- Standards for high nuclear safety are also lacking.
- The Austrians hoped this would be an opportunity for the EU to take a position on the future of nuclear power. Austria's aim was to raise questions, such as:
    - **Is nuclear power consistent with sustainable development?**
    - What of long-term (radioactive) waste disposal and decommissioning?
    - **Cross-border environmental impact vs. sovereignty?**
    - **Is a state free to decide how it will produce electricity?**
    - Is the answer yes for current member states and no for candidate states?

- On the other hand, EU bodies
    - have forced candidate states such as Bulgaria and Lithuania to accelerate the closure of a small number of nuclear power plants deemed quite dangerous.
    - termination of an unsafe nuclear power plant in Bulgaria as a condition to begin EU accession negotiations -> Without the specter of EU membership it would have been much more difficult to close unsafe plants.
    - Even so, Bulgarian officials and nuclear power interests continue to discuss scheduling the closing of a number of reactors in Bulgaria. These debates continue, at least in part, because Bulgaria has electricity export opportunities.
    - The EU could use the accession process to increase transparency in candidate states and support NGO pressure on their governments for information on environmental impacts of energy.

Vail - Illegal Waste Transport and the Czech Republic: An Environmental Sociological Perspective

- In late 2005 Czech authorities first began to discover **substantial amounts of municipal waste illegally transported from Germany to the Czech Republic.**
- the dumping of more than **30 000 tons of German waste** in **'black dumps'** throughout the Bohemian countryside

  => social, economic, and political questions about how to mitigate the negative human health and environmental impacts and prevent dumping in the future.
- the author presents the history of the Bohemian illegal waste problem and then describes and analyses relevant waste management policies in the Czech Republic, Germany, and the European Union - hypothesizes that ***"environmental degradation is caused primarily by institutional political-economic forces, and that the protection of environmental quality can be achieved only through structural reform."***
- "Developing nations are attractive to international capital for several obvious reasons.
    - cheap labor,
    - weak environmental laws, and
    - corrupt business and government
    - ➔ can lower the cost of production => in essence, multinational corporations achieve bigger profits by **externalizing more of the costs** of production."
- the Czech Republic has benefited from globalization: with a relatively low-priced and well-educated work force, the nation has attracted foreign investment; new industries have provided well-paid skilled jobs and often use techniques that are less polluting than those of communist-era firms.
- But CR is also experiencing some downsides of globalization, and illegal waste shipment is one example.
- As new strict regulations came into force and waste treatment costs rose in Germany, it was natural for Germans to seek cheaper disposal alternatives.

- The problem of illegal or 'black' dumps in Bohemia has highlighted the strengths and weaknesses of the current waste policies intended to regulate this trade.

Illegal waste transport and the Czech Republic

- In the autumn of 2005 and the winter of 2006, Czech authorities discovered that significant amounts of municipal waste were being illegally transported into Bohemia from Germany.
- Illegal transports continued to be intercepted by the police and customs officials throughout 2007.
- The waste was detected primarily through the interception and inspection of trucks headed to black dump sites.
- By the spring of 2006, the Czech Environmental Inspectorate (CEI) determined that much of the waste came from Germany
- Black dumps were found in a variety of locations within the Czech Republic, mostly in **North Bohemia** near the German border. A total of **26 illegal dumps** were documented in the media as containing waste that appeared to have originated in Germany.
- The sites where waste was dumped illegally included open fields and lots, farm buildings, a vacated military airfield, warehouses, and even legal landfills. In sum, the CEI identified about **30 000 tons** [1 ton = 2000 pounds] of alleged illegal German waste dumped in Bohemia. Of this amount, about **15 000 tons was ultimately land-filled within the Czech Republic** by the summer of 2006, and **only about 7000 tons was satisfactorily proven to be of German origin**.
- In January 2006, Czech authorities discovered what was to become perhaps the most notorious dump, near the village of Libčeves in North Bohemia.
    - inspectors found around **4000 tons** of municipal waste from Germany – the equivalent of about **200 tractor-trailer truckloads**
    - stored out in the open and in a barn.
    - **some of the waste was hazardous**, and the improper storage **attracted pests and threatened to contaminate the soil and water**.
    - When it was finally agreed that the government of Saxony-Anhalt should repossess the waste, **only about 750 tons were taken back to Germany,** and the **remainder was land-filled in the Czech Republic** [ČTK 2006e].
    - A Czech waste hauler was fined **10 million** Czech crowns for creating the dump, but avoided payment by declaring bankruptcy
- Czech authorities response
    - ➔ regulatory reforms
    - ➔ cooperation and confrontation with their German counterparts.
    - ➔ the government **considered banning all waste imports**
    - ➔ a rule **broadening the list of wastes requiring permits** to enter the country took effect in March 2006 but was **almost immediately abandoned** as impracticable;

plus deemed at variance with EU waste shipment regulations and interfered with the legitimate cross-border waste trade critical to the Czech recycling industry.

- ➔ **more border checks** with **higher potential fines** for violators (maximum fine for improper waste import was raised from CZK 10 million to 50 million)
- ➔ **fines were imposed on several companies**, numerous suspects were **arrested** (by late April 2006, 5 Czechs and 1 German had been arrested)
- ➔ 4 Czech companies were fined between CZK 0.25 million and 10 million for their participation in the smuggling.
- ➔ By June 2006, the CEI announced plans **to seek prosecution of up to 20 German companies**
- ➔ a **special German-Czech environmental commission** was created and a 'Roadmap for the take-back/disposal or recovery of illegally shipped German waste to the Czech Republic' was signed by the environment ministries of both nations in early May 2006. (but Czechs still felt that the German authorities were not particularly forthcoming with assistance in solving the crime and determining responsibility for the clean-up).
- ➔ **At the international level, the Czech Republic advocated stricter regulation of the waste trade**, both in Brussels and in solidarity with its neighbors in the Visegrád group (=the Czech Republic, Hungary, Poland, and Slovakia)

- over a period of many years Germany has pressured the EU to adopt stricter waste policies. For example, the Packaging Waste Directive (94/62/EC) is based heavily on German policies for the collection and recycling of packaging.
- At the same time, recent Czech environmental policy reform has been motivated almost entirely by the need to conform to requirements involved with becoming an EU member state in May 2004 => **Thus, Czech restrictions on the import and disposal of foreign waste have been driven at least indirectly by German initiatives.**

- **main principles of EU regulation of waste management**
  - ➔ the **polluter pays principle** (PPP) saying that those who produce pollution are legally and financially responsible for the clean-up of the pollution (the aim is to internalize environmental costs)
  - ➔ the **proximity principle** states that environmental problems should be dealt with as close to the source of the problem as possible (goal of regional and national self-sufficiency in waste generation, treatment, and disposal).
  - ➔ The **waste hierarchy** establishes an order of priority for the treatment of waste, which includes, in order of most preferred to least preferred options: waste prevention and reduction, reuse, recycling, recovery, and disposal

- The overarching policy context for handling the Czech-German waste transport dispute was set by Waste Shipment Regulation (WSR) which
  - classifies wastes by risk,
  - requires prior authorization for the shipment of waste,

- stipulates that unauthorized waste must be returned to its source of origin or otherwise properly disposed of

=> If waste is determined to have been transported illegally, the producer of the waste must take responsibility for its return and proper disposal.

Q: Which changes in German legislation contributed to the problem? What was wrong with German law? Would the illegal waste shipment be possible/lucrative without cooperation from the Czech side? Who do you think should be blamed?

Germany

- has an international reputation for strict and innovative waste management practices (e.g., the 'Green Dot' recycling program started was a path-breaking policy designed to increase recycling rates and reduce waste production, which has become a model for recycling programs throughout Europe, including CR)
- In 2001, a new waste storage ordinance came in force in Germany
  - ➔ municipal waste may no longer be land-filled directly
  - ➔ rules requiring waste to be incinerated or subjected to mechanical-biological treatment before final disposal came into effect on 1 June 2005.
  - ➔ poorly lined landfills gradually closed down by 2009.
- Hempen [2005] - there was 'little data available' to predict the country's waste storage capacity after 1 June 2005, but some evidence suggests a **national 'capacity shortfall of at least 2 million tons**
- When the rules were applied, **200 of 333 official landfill sites were closed**, driving up waste treatment costs
- The German newspaper Freie Presse reported that '**the price for legal storage of 1 ton of domestic waste is about 32 Euro in the Czech Republic, while an incinerator in Saxony, for instance, requires 170 Euro per ton!!!**
- The **storage of 1 ton** of domestic electronic waste **costs 180 Euros in the Czech Republic and 350 Euros in Germany**. The prices at illegal dumps are even lower
- The Germans already knew that it was difficult to enforce laws restricting cross-boundary waste movement. In 1997, there were **40 000 cases of reported environmental crimes** in Germany, of which nearly **29 600 were cases of unsafe waste management**, including **58 cases of illegal trans-frontier waste shipment**. The police's success rate at solving environmental crimes in that year was 60%
- **weak enforcement/punishment** ("in most cases of **imprisonment up to two years probation** is granted. Usually a criminal **ban on a professional activity is imposed in serious cases only**, i.e. if there is a danger of recidivism")
- "An examination of the many known cases of illegal German waste export over the last twenty years reveals patterns. Intense pressure within Germany caused by **increasing waste generation and decreasing capacity** create economic incentives to find quick and easy solutions. As a result, when **Germans have sought to export waste**, companies or individuals in the receiving nations have **conspired to dispose of the waste cheaply**, often in questionable ways. The recent appearance of black dumps in Bohemia follows this pattern."

Conclusions

- ***Illegal export was a predictable consequence of the 2005 German landfill rules***
    - The OECD explains that when materials are banned or redirected from landfills, which was the aim of the German legislation, '**the hope, of course, is that these products will, as a result, be recycled**. But the incentive offered by the tax or ban is not an incentive to recycle, **but rather an incentive to not landfill** => Illegal dumping, exporting, and incineration are also stimulated'
    - This raises questions about the sincerity of the German government's desire to enforce waste export law – in what may amount to a tacit collaboration between national authorities, municipalities, and/or businesses to reduce operational costs. Such an interpretation is consistent with the hypothesis that **governments and business often collaborate as to promote economic activity at the expense of environmental quality** (further research needed)
- ***The export of waste shifts environmental risk from Germany to other nations and undermines sustainability principles***
    - Restrictions on export provide incentives for waste reduction or recycling. Unrestricted export means that producers may push waste processing risks on others, undermining EU and German principles of sustainable development. In this case, **Germans have benefited at home from strict land-filing laws and Czechs have been made to bear the costs of disposal** => German waste export to Bohemia shifts the risk abroad and **externalizes the costs of production** and consumption.
- ***Policy loopholes – intentional or not – make illegal transport easy and lucrative***
    - it is simplistic to depict Germany as the villain and Bohemia as a purely innocent victim. Indeed, the Czech Environment Minister at the time initially blamed the situation on **Czechs who helped Germans bring the waste into the country**. 'German businessmen often do not know that they are sending waste to the Czech Republic at variance with law'
- Study of black dumping in Bohemia suggests that the **waste transport policies and practices within individual nations and throughout the EU have contributed to the phenomenon of illegal waste shipment**, and until **loopholes** allowing free trade in waste labeled for recycling, **coupled with weak enforcement,** are remedied, there will continue to be a high probability of successful illegal transport.

Hey, EU Environmental Policies: A short history of the policy strategies

Summarizes the development of European Environmental policies and changes in focus (as regards the main environmental concerns as well as various instruments of environmental protection) between 1973 and 2003, reviewing **Six Environmental Action Programs** (EAPs)

- medium term programs and strategic policy documents, often reflect a change in the general political climate of their time

- programs contain lists of planned activities, not binding programs for action
- in general, there has been much more continuity than change over the 30-year period

1973 – 1976 first EAP, 1977 – 1982 second EAP

- following the first United Nations Conference on the Environment in Stockholm in 1972 => **growing public and scientific concerns on the limits to growth**,
- EC commits to **establish** a Community environmental policy
    - "*economic development, prosperity and the protection of environment are mutually independent*"
    - "*the protection of the environment belongs to the essential tasks of the Community*"
    - already contains many of the later ideas behind **sustainable development**
- in terms of a practical approach the first EAP (and the second EAP, too) advocated quality values for air and water
- number of framework directives, especially for water and waste decided during this period
- initial enthusiasm declined considerably during the periods of economic recession (1975 – 1978, 1981 – 1983)

1982 – 1986 third EAP, 1987 – 1992 fourth EAP

- new focus on **benefits and risks of environmental policies and their linkage to the internal market** -- the key driver for programming and activities, e.g.
    - environmental emissions standards needed to **be harmonized** to avoid distortions to industry competitiveness
    - product regulations had to be harmonized
- third EAP made a positive reference to the first global strategy for Sustainable Development
- practice of environmental policies during the eighties was particularly concerned with clean-air policies, noise, and risk management for industrial sites
- 1987: environmental protection received its **own chapter in the Treaty** …
- **4th EAP** "… a more **integrated approach**
    - *For the first time, environmental protection was not perceived as an additive, but rather as an **integrated activity within the whole production process**. … to reduce energy or material inputs and to close cycles, so that waste streams could be minimized.*
    - *Furthermore, pollution control was to systematically **control all environmental media** (water, air and soil) and involve an **evaluation of the problem causing substances**.*
    - *For the first time, the evaluation of the **new, incentive based instruments**, such as **taxes, subsidies or tradable emissions** permits was announced."*

- external conditions:
  (1) the emergence of global threats such as **climate change reached the official agenda**; number of international conferences urging for dramatic policy changes
  (2) the Community saw chance to **become an international "leader"**, thereby strengthening European integration and the Commission's own role in international politics
  (3) old regulatory (command and control) approach had been discredited, **new regulatory** approach (**market mechanisms, deregulation and self-regulation**) had taken hold in Scandinavian countries, Denmark, Netherlands, and Germany
  (4) growing public concern -> at the end of the 1980s, a mounting wave of environmentalism. Membership of environmental organizations increased considerably. Green parties were popular in several EU countries, and achieved good results at national levels and in the European Parliament

1992 – 1994 fifth EAP

- principal aim of sustainable development
  - setting **medium and long-term objectives for the reduction** of some pollutants
- **sector approach**, i.e. focus on industries that were particular culprits
  - transport
  - energy
  - agriculture …
- new instruments
  - especially **market-oriented instruments** such as fiscal incentives or voluntary instruments, which strengthen producers' and consumers' own interests in environmental decision-making.
- new consensus-oriented approach -> increasing role of NGOs and local authorities
- unfortunately, a downward cycle of environmental policies - **a roll-back** 1992 – 1995, triggered probably by
  (1) member states were not willing to follow paradigmatic change pushed by the Commission, demands to re-nationalize
  (2) difficulties in ratifying the Maastricht Treaty contributed to more cautious attitude of European Commission
  (3) The preference structure/focus in Germany changed because of the reunification and the emphasis on economic problems (high unemployment) that came with reunification; same true for countries that later, in 2004 joined EU (e.g., Visegrad 4 etc.)
- at the **end of 90ies patchwork of different, often contradictory trends, different policies being promoted simultaneously**
- but … **sustainability remains** on the agenda and is strengthened as Community target in the Amsterdam Treaty from 1997

- **shift from previous top-down approach** and its instrumental focus **towards broader and less committed (sectoral) approach** - council formations were asked to identify the key problems in their sectors and to define their objectives and activities)
- an impressive **revival of environmental legislation**
    - new **complex and holistic framework legislation** such as the Ambient Air Quality Directive, the Water Framework Directive, or the ICCP [Integrated Prevention and Pollution Control] Directive
    - "**new target oriented legislation**, setting maximum national emission ceilings for key pollutants, but leaving member states the freedom to choose how to achieve necessary reductions. ... [later with the 2003 Emission Trading Directive -- another target-oriented policy -- setting nationally differentiated CO2 targets (the so-called burden-sharing agreement) became legally binding]
    - **completion, revision or modernization of existing legislative programs**
    - introduction of many **new environmental policy instruments** (such as producer responsibility, **environmental impact assessment, emission trading**…)
    - new procedural legislation or revision of existing legislation **strengthening civil society rights**, three Aarhus pillars**: freedom to information, participation rights and access to justice.**
    - **inviting environmental NGOs** to play role in committees, expert networks and consultation processes; to counterbalance industrial lobbying
- each of those pieces of legislation had more or less serious shortcomings, however, the ***system of environmental programs, duties, rights and incentives made impressive progress during that phase***

The starting point of the 6th EAP [or, where did we stand in 2004]:

- overall political agenda is driven by
    - development concerns of **new member states,**
    - new wave of **deregulation**
    - increasing relevance of economic considerations
- new program is reluctant to set targets and to identify key instruments
- starting point is that "so-called persistent environmental problems such as climate change, the loss of biodiversity, or the overconsumption of resource **require a broader approach beyond environmental legislation** … "
- a cautious approach -> formulates a framework **of general themes, principles, and objectives,**
- the political strategy is to postpone contentious and controversial political decisions to later phases
- **strengthening the role of private and public professionals**
- EC is changing its key role from an initiator of legislation to a manager of policy processes, **policy to become more and more a theme for small specialist expert communities**

Outlook

- future environmental policies need to become re-focused
- **persistent environmental problems** are the challenge for the forthcoming phase of policy making and should be prioritized.
- **solving persistent environmental problems** needs the involvement of other sectors, but environmental policy will have to play a key role
- a great deal of **scope for improvement in emissions standards, and restrictions or incentives for further preventative behavior** from business and consumers

Summing-up, the 30 years discussed

- gradual integration of environmental policies within production process (market impact)
- varying intensity of public interest
- increased use of market based instruments
- developing international cooperation and integration
- growing use of expertise, more focused, local and/or sectoral approach

Kramer, EU Enlargement and the Environment: Six Challenges

Q: Remember the challenges? Which would you say was the greatest one of them all?

- written before the enlargement of the EU in 2004 (published in Spring 2004)
- a prospective entrant before admission had to adopt the *acquis communitaire (acquis)* – "'the common body of EU legislation' of which the **environmental acquis** [one of 31 thematic chapters] comprises an integral component.
- In legal sense …. , 'it means the **complete alignment of national legislation so that it complies 100 percent with the requirements of EU legislation.** And not just on paper but of course also in fact. [Commission 1997b: 3]" (p. 290)

  - transposition (incorporation into national legislation),
  - implementation
  - enforcement [administrative capacity + evaluation]

  ➔ … implementation and enforcement being "a much more difficult nut to crack'"

Q: Which of the above do you find the most important one?

- ***candidate countries must rely primarily on their own financial and other resources to meet*** it
  - can at most count on about **5%** of the cost being defrayed by EU contributions, see p. 295]
  - resources already severely strained in meeting numerous other demands including those entailed in the overall accession process
- do accession countries meet those challenges?

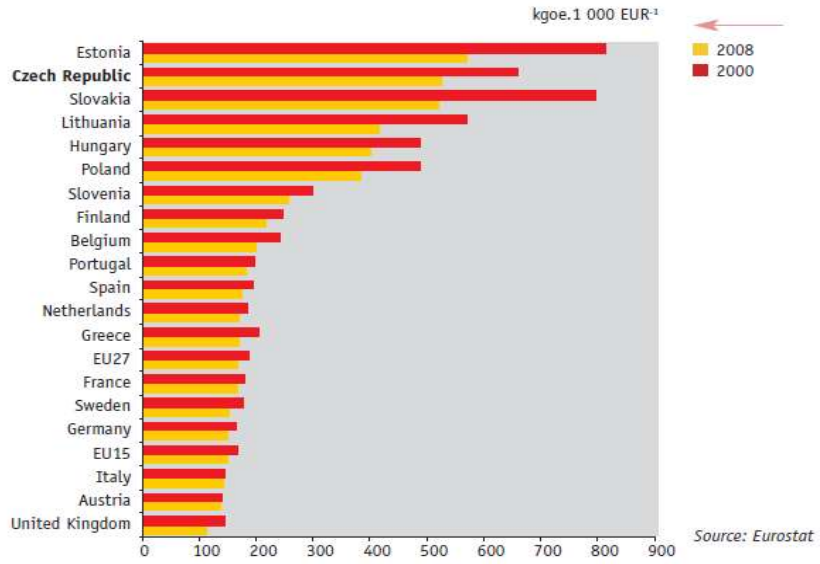
  - probably not …
  - "as EU officials themselves candidly admit, ***all of them attach a far lower priority to protecting the environment than their attachment to entering the EU as quickly as possible and in addressing what they consider much more pressing problems of economic revitalization and growth***." (p. 291)
  - Some EU officials also worry that member states will offer a *quid pro quo* by *"***letting them off" on environmental acquis for being especially tough with them on some politically charged issues such as the free movement of labor and refugees**

- notwithstanding these challenges, substantial progress has been made …
  - relying mostly on their own resources….(says Kramer) … the candidate countries have done so much in little more than decade; ***after having emerged from communist regime with a legacy of profound neglect and indifference towards environment***
- ad (1) the **fiscal challenge**: **Can you explain?**
  - EC estimated that it would cost CEE candidate countries **cca EUR 80-110bn** to comply with EU requirements for
    - **drinking water supply,**
    - **wastewater management,**
    - **waste management and large combustion plants**
  - Overall, the EU estimates that candidate countries on average must spend **2-3% of GDP to ensure implementation of the environmental acquis** and majority of this must come from own resources
  - any transition periods [=allowed delays] have to be justified, only short-term and more likely for fulfillment of investment-intensive regulations
  - important issue: "it seems clear that ***the private sector – both producers and consumers – will shoulder a heavy load in financing EU-related environmental investments.***
  - ➔ it becomes critical that candidate countries pursue the privatization of environmental services such as water and power supply and waste removal; also the concomitant establishment of so-called full-cost recovery pricing = the elimination of subsidies and the establishment of market-based prices
- ad (2) **the administrative challenge**: **Can you explain?**
  - administrative capacity to **transpose, implement and enforce** the environmental *acquis*
  - **one of the key challenges** –obviously, this is also a question of money, **qualified personnel** (down to availability of copying machines), lots of **organizational issues**, and that on both the regional and local level
  - EU will soon require applicant countries to subject all EU pre-accession investment projects to a rigorous environmental impact assessment before their implementation; including mandatory public participation to mitigate the above concerns

- ad (3) **the environmental challenge: Can you explain?**
  - " .. the ***challenge of promoting sustainable development*** remains a work in progress." (e.g. EU's failure to integrate the principle of sustainable development throughout the assistance programs – e.g. subsidization of agriculture and motorization)
- ad (4) **the 'democratic deficit' challenge**: **Can you explain?**
  - **role of NGOs insufficient**, many of CEE NGOs in unstable, poor, or very poor financial state; CR: slightly better developed NGO sector but still a 2001 poll showed that 58% of respondents could not name any environmental NGO
  - "*In CEE countries, as former President Havel of the Czech Republic has observed,* ***strengthening Vox Populi has been a 'difficult process'*** *with many public officials retaining the communist view of the citizenry as an adversary, not a partner, in the exercise of power. …*
  - *the* ***EU itself, even if unintentionally, has managed environmental accession in such a way largely to exclude CEE environmentalists*** *from substantial meaningful participation in it. … initiatives are underway to mitigate this bleak situation … the EU has established a 'Public Right to Know Project' that works closely with environmental NGOs and private individuals to pressure CEE governments to establish minimum standards for public access to information regarding the environment."* (pp. 302 – 3)

- ad (5) **the energy challenge: Can you explain?**
  - **energy intensities in CEE countries way too high** (compared to old EU countries and US, e.g., five times higher in Bulgaria, and twice as high in Czech and Slovak Republics, in East Germany production and consumption increased yet CO2 emission were reduced by more than half after reunification),
  - legacy of socialism/communism;
  - heavy reliance on nuclear power (and nuclear power plants that are wanting in their quality – a highly controversial point).

Chart 4 → **Energy intensity of the economy, an international comparison [kgoe.1 000 EUR^{-1}], 2000, 2008**



kgoe – Kilogram of Oil Equivalent, a unit corresponding to the energy obtained from 1 kg of oil (41.868 MJ or 11.63 kWh).

- ad (6) **the political challenge: Can you explain?**
    - Jehlicka & Tickle article: "after accession, the status of political will may become more problematic given that … **the EU inevitably will have diminished leverage** over the former applicant countries and the latter will have more opportunity to **set their own agendas and priorities**, including those towards the environment."
    - Are the lowest anticipated benefits (134 billion Euro) really upwards of 18 percent greater than the highest estimated costs (110 billion Euro) of fully implementing the environmental *acquis*? (p. 309)
    - in the words of Bedrich Moldan of the Czech Republic, that *"**what we are doing is not because we want to satisfy Brussels clerks but because we, of course, want to have a better environment'** (CTK, 27 October 1999)."*
    - *If this effort is to succeed, it also becomes critical that the EU eschew the mixed messages that it too often sends on the environment – messages that in word typically **say all the right things about environment and the need for sustainable development but in deed frequently entail policies such as the stress on large-scale intensive agricultural development** that directly conflict with its rhetorical commitment to sustainability*. Such mixed messages only weaken those environmentalists in CEE countries.

Conclusion

- "This author is cautiously optimistic that the EU is evolving in ways – albeit at times hesitantly, erratically, and perhaps overly slowly – that will make it a much more 'environmentally friendly' institution than it is now. The clear thrust of this evolution is towards more openness, transparency, accountability and a greater utilization of market-based solutions to environmental challenges."

… now focusing on the Czech case….

Kruzikova, EU Accession and Legal Change: Accomplishments and Challenges in the Czech Case

- published in spring 2004
- examines the accomplishments of, and the challenges to, the reform of environmental laws in CR as driven by the EU (<= harmonization and implementation efforts)
- **Q:How difficult and how successful the process was?**
- an enormous and somewhat rushed efforts to conform to all EU requirements
- EU environmental law considered among the most difficult ones to comply with

Q: There are, in general, two sorts of challenges depending on origin, can you say which ones?

- " … many remaining barriers to the effective administration, implementation and enforcement of EU environmental policy are posed by the challenges of merging the existing legal cultures, expectations and practices of EU Law with those of candidate countries."
- three waves of Czech environmental legislation since 1990… while the character of the Community law presents accession states with one set of challenges, **the domestic legal cultures, practices and participant expectations present a second set**…
    - 1st wave – main body of legislation approved and brought into effect (transforming the communist system to a democratic one)
    - 2nd wave mainly concerning international obligations of CR to be incorporated into national law
    - 3rd wave – to achieve compliance with EC's law, at the same time EU environmental law continued to develop….
- The Czech Republic was the first candidate country to close negotiations on the Environment chapter, on June 2001. Only two transition periods were agreed by the European Commission for the CR: the first for packaging waste and the second for municipal wastewater. (In comparison, nine for Poland, four for Hungary, seven for Slovakia, and two for Slovenia)
- "In many respects, the Czech Republic has been **quite successful in the transposition** of the major EU environmental directives." … but **long way to go on implementation and enforcement** (and related assessment measures)
- all in all legal **changes have been positive for the CR** (number of acts, such as that on IPPC or some in areas of waste and water management and air protection, would not have been enacted without the need to comply with EU requirements)
- Two sets of implementation challenges
    1. **Implementation challenges stemming from the Community Law Can you list and explain few?**
        - The Community law itself since based on the legal culture of West European democratic countries that has been developing since the end of World War II,

while CEE countries went through a 40-year breach of legal continuity, with different set of principles and mechanisms

- national law is subordinated to Community law and candidate countries are not accustomed to this supremacy
- Community environmental law has not developed systematically and continues changing its nature [the moving target problem], …plus community law provisions not always clear and unambiguous
- certain directives set out new, innovative instruments and approaches, which (as e.g. IPPC) might require coordination and integration of different administrative/permitting procedures

2. Implementation challenges from within the Czech Republic Can you list and explain few?

- " … related to **attitudes, traditions and practices within the Czech Republic**"
- **lack of institutional capacity** to ensure full and correct implementation,
- **lack of clear allocation of competencies**, overlapping
- **lack of expertise:** intensive training of civil servants at all levels of public administration, as well as of judges and other lawyers will be necessary"
- " … a number of challenges are engendered **by the rapid rush towards implementation**. … there has not been enough time or institutional capacity to establish a sufficiently conceptual and systematic approach towards the implementation of environmental law. In many respects. Czech officials have missed opportunities to improve the whole system of environmental law. … In the Czech Republic, there are currently about 40 environmental acts, more than 30 Cabinet regulations and about 90 ministerial decrees – and these numbers change monthly. … The rush towards implementation has **left overlapping, and potentially contradictory, legislation and administrative procedures** to be carried out under the law. This is likely to result in unclear interpretations of law."

- **The European Court of Justice as a Potential Surprise**
  - When a member state does not comply with the ECJ's judgments, the Court – after another action of the Commission – may impose penalties (this goes back to Treaty of Rome 1956)
  - A second 'surprise' for which candidate country legal systems may be unprepared lies in Article 234 of the Treaty of Rome. Accordingly, the ECJ interprets Community environmental law with **preliminary rulings**, which are initiated by national courts asking for ECJ interpretation, in particular cases, of Community provisions vis-à-vis national rules. Preliminary rulings contribute to the uniformity of interpretation and application of Community environmental law.
  - Yet, in candidate countries such as the Czech Republic, **courts lack expertise on the ECJ and its powers**. They are not used to asking higher courts for an opinion concerning the interpretation of legal norms.
  - The ECJ has historically, through its rulings, contributed to the progressive, participatory democratic nature of environmental law and decision making – some policymaking processes are open to public

- "The Czech Republic and the other candidate countries will have to accept this significant change in domestic legal systems upon EU membership."

Jehlicka & Tickle, Environmental Implications of Eastern Enlargement: The End of Progressive EU Environmental Policy?

- the authors ask whether the one-way process of CEE adaptation to EU requirements, and the management of this process by EU institutions, justifies the "Europeanisation" perspective of CEE national environmental policy; or **whether this top-down process, especially after accession, is supplemented by a bottom-up process reflecting national preferences**.
- **What does top-down mean? Bottom-up?**
- [there are incentives for, as well as historical evidence of, more progressive environmental legislation in member countries; moreover, EC's high degree of influence, insistence on full adoption of environmental acquis and only a limited number of transition periods should lead to relatively high degree of harmonization]
- Method: 29 in-depths interviews with environmental policy experts in Visegrad (V4) countries (in 2000), and five interviews with experts from EU countries (in 2000/2001) [i.e. already in the middle of the negotiations about the environmental acquis]
- Is there a need for an "applicant-state-centered approach"?
- **Two sets of questions** were the basis of the questionnaire:
  - What is the domestic base of environmental policy in the V4 states? [any signs indicating **passive adaptation contra more proactive approach**?]
  - What is the capacity that V4 countries have to shape EU environmental policy?
- CEEs do not have a tradition of strong environmental policies
- in the future they might give economic development priority over stringent environmental policy
- CEEs expected to try to block future stringent new legislation, press for lower standards
- **Q: Why would they do that?**
- passivity might be disadvantageous b/c then these states would have to pass new legislation over which they had little or no influence
- Homeyer 2001 suggests that there are incentives (e.g. reducing EU-sourced trans-boundary pollutants, geographical and cultural proximity to leader countries) for CEE countries to take pro-active approach
- smaller states
  - often neglected in international relations
  - lack capacity to address all negotiations (lack of staff, expertise, other resources)
- will CEEs be able to take a pro-active approach?
- will CEEs coordinate on common approach?
- how will the enlargement affect EU environmental policy?

Findings:

- "Despite **initial evidence of a proactive approach** to international environmental policy in the V4 countries, this model became quickly subsumed by the 'hierarchical imposition' of EU requirements, which since has become the dominant framework for the development of their domestic environmental policy." (p. 92)
- "Owing to the **weak domestic base of environmental policy** [lack of experts with appropriate training and experience, weak role of green parties] as a hegemonic model, it is highly unlikely that V4 states are, in the short run, capable of adopting a proactive approach to environmental policymaking at the EU level when they become full members. …
- We also find that V4 states have not, and **do not seem likely to coordinate their strategies** – either among themselves or with environmentally 'laggard' member states.
- **despite their similar history, common environmental problems and shared goal of EU membership, V4 countries have not engaged in systematic cooperation** either in the area of global environmental agreements or in the process of approximation with EU
- Instead, it appears that **they would rather align themselves** with the north-western 'pioneer' member states that have been most active in transferring environmental know-how and have made environmental policy discourse in V4 countries largely compatible with their policy models." (p. 93) -> **No danger of watering down of European environmental policy.**